



NORTH CAROLINA  
Environmental Quality

ROY COOPER  
Governor

MICHAEL S. REGAN  
Secretary

MICHAEL ABRACZINSKAS  
Director

**TBD**

Mr. Chris Lane  
Plant Manager  
Southern Power Company  
5755 North Carolina 801 Highway  
Salisbury, NC 28147

SUBJECT: Air Quality Permit No. 08758T21  
Facility ID: 8000163  
Plant Rowan County  
Salisbury, Rowan County, North Carolina  
Fee Class: Title V  
PSD Class: Major

Dear Mr. Lane:

In accordance with the permit application for renewal of a Title V permit and renewal of a Title IV permit, received June 8, 2018, we are forwarding herewith Air Quality Permit No. 08758T21 to Plant Rowan County, Salisbury, Rowan County, North Carolina, authorizing the construction and operation of the emission source(s) and associated air pollution control device(s) specified herein. Additionally, any emissions activities determined from your Air Quality Permit Application as being insignificant per 15A North Carolina Administrative Code 02Q .0503(8) have been listed for informational purposes as an "ATTACHMENT" to this cover letter. Please note the requirements for the annual compliance certification are contained in General Condition P in Section 3. The current owner is responsible for submitting a compliance certification for the entire year regardless of who owned the facility during the year.

As the designated responsible official it is your responsibility to review, understand, and abide by all of the terms and conditions of the attached permit. It is also your responsibility to ensure that any person who operates any emission source and associated air pollution control device subject to any term or condition of the attached permit reviews, understands, and abides by the condition(s) of the attached permit that are applicable to that particular emission source.

If any parts, requirements, or limitations contained in this Air Quality Permit are unacceptable to you, you have the right to request a formal adjudicatory hearing within 30 days following receipt of this permit, identifying the specific issues to be contested. This hearing request must be in the form of a written petition, conforming to NCGS (North Carolina General Statutes) 150B-23, and filed with both the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, North Carolina 27699-6714 and the Division of Air Quality, Permitting Section, 1641 Mail Service Center, Raleigh, North Carolina 27699-1641. The form for requesting a formal adjudicatory hearing may be obtained upon request from the Office of Administrative Hearings. Please note that this permit will be stayed in its entirety upon receipt of the request for a hearing. Unless a request for a hearing is made pursuant to NCGS 150B-23, this Air Quality Permit shall be final and binding 30 days after issuance.



You may request modification of your Air Quality Permit through informal means pursuant to NCGS 150B-22. This request must be submitted in writing to the Director and must identify the specific provisions or issues for which the modification is sought. Please note that this Air Quality Permit will become final and binding regardless of a request for informal modification unless a request for a hearing is also made under NCGS 150B-23.

The construction of new air pollution emission source(s) and associated air pollution control device(s), or modifications to the emission source(s) and air pollution control device(s) described in this permit must be covered under an Air Quality Permit issued by the Division of Air Quality prior to construction unless the Permittee has fulfilled the requirements of NCGS 143-215-108A(b) and received written approval from the Director of the Division of Air Quality to commence construction. Failure to receive an Air Quality Permit or written approval prior to commencing construction is a violation of NCGS 143-215.108A and may subject the Permittee to civil or criminal penalties as described in NCGS 143-215.114A and 143-215.114B.

Rowan County has triggered PSD Increment Tracking for PM<sub>10</sub>, SO<sub>2</sub>, and NO<sub>x</sub>. This permit renewal is not expected to consume or expand any increments for any tracked pollutants.

This Air Quality Permit shall be effective from TBD until TBD+5 years, is nontransferable to future owners and operators, and shall be subject to the conditions and limitations as specified therein. Should you have any questions concerning this matter, please contact Russell Braswell at 919-707-8731 or [russell.braswell@ncdenr.gov](mailto:russell.braswell@ncdenr.gov).

Sincerely yours,

William D. Willets, P.E., Chief, Permitting Section  
Division of Air Quality, NCDEQ

Enclosure

c: Heather Ceron, EPA Region 4 (with review)  
Mooresville Regional Office  
Central Files  
Connie Horne (cover letter only)

## Attachment to Cover Letter to Permit No. 08758T21

**Summary of Changes to Permit**

The following table lists the changes Plant Rowan County, Air Permit No. 08758T20:

Pages*	Section*	Description of Changes
Update page numbers in final version	Throughout	<ul style="list-style-type: none"><li>Updated permit dates/numbers.</li><li>Fixed formatting.</li></ul>
	2.1 A.2 and B.2	<ul style="list-style-type: none"><li>Removed semiannual reporting requirement because the condition already requires quarterly reporting.</li></ul>
	2.1 B.4.	<ul style="list-style-type: none"><li>Noted dates of required annual reports.</li><li>Noted that "particulates" refers to the front-half of particulate testing. This is similar to section 2.1 B.5.</li></ul>
	2.1 B.5.	<ul style="list-style-type: none"><li>Noted dates of required annual reports.</li></ul>
	2.1 D.6.	<ul style="list-style-type: none"><li>Noted the date of the initial energy assessment.</li><li>Changed sections for monitoring/recordkeeping/reporting in order to be the same as 2.1 E.4. This doesn't change the facility's overall requirements, and is only for clarity.</li></ul>
	2.1 D.7.	<ul style="list-style-type: none"><li>Noted the dates of the initial energy assessment and notification of compliance status.</li></ul>
	2.1 E.4.	<ul style="list-style-type: none"><li>Noted the date of the initial energy assessment.</li></ul>
	2.1 E.5.	<ul style="list-style-type: none"><li>Noted the dates of the initial energy assessment and notification of compliance status.</li></ul>
	3.	<ul style="list-style-type: none"><li>Updated General Conditions to v5.3.</li></ul>

\* This refers to the current permit unless otherwise stated.

**List of Insignificant Activities under 15A NCAC 02Q .0503(8)**

<b>Emission Source I.D. No.</b>	<b>Emission Source Description</b>
<b>I-ST1</b>	Seven, 6,200 gallons each, lube oil reservoirs
<b>I-ST2</b>	Five, 500 gallons each, false start drain tanks
<b>I-ST3</b>	Seven, 5,000 gallons each, CT wash tanks
<b>I-ST4</b>	Four, 16,500 gallons each, 19.5 % aqueous ammonia tanks
<b>I-ST5</b>	One 6,000 gallon sodium hypochlorite (bleach) tank
<b>I-ST6</b>	One 6,000 gallon sulfuric acid tank

1. Because an activity is insignificant does not mean that the activity is exempted from an applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement.
2. When applicable, emissions from stationary source activities identified above shall be included in determining compliance with the permit requirements for toxic air pollutants under 15A NCAC 02D .1100 "Control of Toxic Air Pollutants" or 02Q .0711 "Emission Rates Requiring a Permit".
3. For additional information regarding the applicability of GACT see the DAQ page titled "The Regulatory Guide for Insignificant Activities/Permits Exempt Activities". The link to this site is as follows:  
<http://deq.nc.gov/about/divisions/air-quality/air-quality-permits/specific-permit-conditions-regulatory-guide>



State of North Carolina  
Department of Environmental Quality  
Division of Air Quality

## AIR QUALITY PERMIT

Permit No.	Replaces Permit No.	Effective Date	Expiration Date
08758T21	08758T20	TBD	TBD+5 years

Until such time as this permit expires or is modified or revoked, the below named Permittee is permitted to operate the emission source(s) and associated air pollution control device(s) specified herein, in accordance with the terms, conditions, and limitations within this permit. This permit is issued under the provisions of Article 21B of Chapter 143, General Statutes of North Carolina as amended, and Title 15A North Carolina Administrative Codes (15A NCAC), Subchapters 02D and 02Q, and other applicable Laws.

Pursuant to Title 15A NCAC, Subchapter 02Q, the Permittee shall not construct, operate, or modify any emission source(s) or air pollution control device(s) without having first submitted a complete Air Quality Permit Application to the permitting authority and received an Air Quality Permit, except as provided in this permit.

**Permittee:** **Plant Rowan County**  
**Facility ID:** **8000163**

**Facility Site Location:** **5755 North Carolina 801 Highway**  
**City, County, State, Zip:** **Salisbury, Rowan County, NC 28144**

**Mailing Address:** **5755 North Carolina 801 Highway**  
**City, State, Zip:** **Salisbury, NC 28144**

**Application Numbers:** **8000163.18A & B**  
**Complete Application Date:** **June 8, 2018**  
**Primary SIC Code:** **4911**

**Division of Air Quality,**  
**Regional Office Address:** **Mooreville Regional Office**  
**610 East Center Avenue, Suite 301**  
**Mooreville, NC 28115**

Permit issued this the **TBD day of TBD.**

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William D. Willets, P.E., Chief, Permitting Section  
By Authority of the Environmental Management Commission

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List of Acronyms

Acid Rain Permit Application

## SECTION 1- PERMITTED EMISSION SOURCE(S) AND ASSOCIATED AIR POLLUTION CONTROL DEVICE(S)

The following table contains a summary of all permitted emission sources and associated air pollution control devices:

Page No.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device
Update page numbers in final version	Unit 1, Unit 2, and Unit 3  (PSD; NSPS, Subpart GG; MACT, Subpart YYYY)	Three natural gas/No. 2 fuel oil-fired simple-cycle internal combustion turbines (1,628 million Btu per hour heat input rate each, when firing natural gas, 1,875 million Btu per hour heat input rate each, when firing No. 2 fuel oil), each equipped with dual fuel dry Low-NOx combustors and having water injection capability for NOx control	NA	NA
	Unit 4  (PSD; NSPS, Subpart GG; MACT, Subpart YYYY)	One natural gas/No. 2 fuel oil-fired combined-cycle internal combustion turbine (1,628 million Btu per hour heat input rate, when firing natural gas, 1,875 million Btu per hour heat input rate, when firing No. 2 fuel oil), equipped with a heat recovery steam generator and a steam turbine, dual fuel dry Low-NOx combustors and having water injection capability for NOx control, and inlet air evaporative coolers	Unit 4 SCR	Selective catalytic reduction
	Unit 5  (PSD; NSPS, Subpart GG; MACT, Subpart YYYY)	One natural gas-fired combined-cycle internal combustion turbine (1,628 million Btu per hour heat input), equipped with a heat recovery steam generator and a steam turbine, dual fuel dry Low-NOx combustors, and inlet air evaporative coolers	Unit 5 SCR	Selective catalytic reduction
	TK-1* and TK-2*	Two No. 2 fuel oil, fixed-roof storage tanks (not to exceed 3.6 million gallons capacity each, actual capacity 3.1 million gallons each) with atmospheric vents	NA	NA
	Tower 1 (PSD)	One cooling tower with drift eliminators (123,220 gallons per minute recirculating water flow rate)	NA	NA
	ES-6  (NSPS, Subpart Dc; MACT, Subpart 5D; RACT; Case-by-Case MACT)	One firetube design natural gas-fired auxiliary boiler (16.74 million Btu per hour maximum heat input rate)	NA	NA
	ES-8  (MACT, Subpart 5D; Case-by-Case MACT)	One natural gas-fired process heater (4.0 million Btu per hour maximum heat input rate)	NA	NA

\* These sources (ID Nos. TK-1 and TK-2) are listed for information purposes only. They have no applicable requirements.

## SECTION 2- SPECIFIC LIMITATIONS AND CONDITIONS

### 2.1- Emission Source(s) Specific Limitations and Conditions

The emission source(s) and associated air pollution control device(s) listed below are subject to the following specific terms, conditions, and limitations, including the monitoring, recordkeeping, and reporting requirements specifically identified herein as applicable requirements:

- A. Three natural gas/No. 2 fuel oil-fired simple-cycle internal combustion turbines (ID Nos. Unit 1, Unit 2, and Unit 3) with water injection capability for NO<sub>x</sub> control (ID Nos. CD-U1, CD-U2, and CD-U3) respectively**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Visible emissions	20 percent opacity	15A NCAC 02D .0521
Sulfur dioxide, Nitrogen oxides	As defined in specific condition	15A NCAC 02D .0524 (40 CFR 60 Subpart GG)
Opacity, Nitrogen oxides, Sulfur dioxide, Carbon monoxide, Volatile organic compounds, Particulates/PM <sub>10</sub> , Sulfuric acid	As defined in specific condition	15A NCAC 02D .0530
Hazardous air pollutants	National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines -No requirements per 63.6090(b)(4)	15A NCAC 02D .1111 (40 CFR 63, Subpart YYYY)
Nitrogen oxides	Phase II Acid Rain permit requirements See Section 2.2	15A NCAC 02Q .0402 (40 CFR Part 72)
	(Federally Enforceable Only) Cross State Air Pollution Rule Requirements See Section 2.3.	40 CFR Part 97, Subparts AAAAA and BBBBB
Sulfur dioxide	Phase II Acid Rain permit requirements See Section 2.2	15A NCAC 02Q .0402 (40 CFR Part 72)
	(Federally Enforceable Only) Cross State Air Pollution Rule Requirements See Section 2.3.	40 CFR Part 97, Subpart CCCCC

#### 1. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from these sources (**ID Nos. Unit 1 through Unit 3**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.



**Testing** [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

**Monitoring/Recordkeeping** [15A NCAC 02Q .0508(f)]

- c. No monitoring/recordkeeping is required for visible emissions from the firing of natural gas in these sources **(ID Nos. Unit 1 through Unit 3)**.
- d. i. To ensure compliance, prior to these sources **(ID Nos. Unit 1 through Unit 3)** operating more than 1,100 hours using No. 2 fuel oil and for each subsequent 1,100 hours of operation after the last test (excluding any hours while firing natural gas), the Permittee shall observe the emission points of these sources **(ID Nos. Unit 1 through Unit 3)** for any visible emissions above normal. The observations must be made for each 1,100 operating hour period to ensure compliance with this requirement. If visible emissions are observed to be above normal, the Permittee shall either:
  - (A) take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
  - (B) demonstrate that the percent opacity from the emissions points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 A.1.a above.
- ii. The Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521 if:
  - (A) the above-normal emissions are not corrected per d.i.(A) above;
  - (B) the demonstration in d.i.(B) above cannot be made, or
  - (C) the 1,100 hours while using No. 2 fuel oil observations are not conducted per d.i above.
- e. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
  - i. the date and time of each recorded action;
  - ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
  - iii. the results of any corrective actions performed.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

**Reporting** [15A NCAC 02Q .0508(f)]

- f. No reporting is required for visible emissions from the firing of natural gas in these sources **(ID Nos. Unit 1 through Unit 3)**.
- g. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Section 2.1 A.1.d and e above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

## 2. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS (40 CFR Part 60, Subpart GG)

- a. For these sources (**ID Nos. Unit 1 through Unit 3**), the Permittee shall comply with all applicable provisions, including the requirements for emission standards, notification, testing, reporting, recordkeeping, and monitoring in accordance with 15A NCAC 02D .0524, "New Source Performance Standards (NSPS)" as promulgated in 40 CFR Part 60, Subpart GG, including Subpart A "General Provisions".
- b. As required by 15A NCAC 02D .0524, for these sources (**ID Nos. Unit 1 through Unit 3**), the Permittee shall comply with the following emission standards at all times, except during start-up, shutdown, and malfunction:

Affected Facility	Pollutant	Emission Limits
<b>Unit 1 through Unit 3</b>	Nitrogen oxides	0.011% by volume at 15% O <sub>2</sub> and on a dry basis (110 ppmvd at 15% O <sub>2</sub> ), while firing natural gas or No. 2 fuel oil <sup>1</sup>
<b>Unit 1 through Unit 3</b>	Sulfur dioxide	0.015% by volume at 15% O <sub>2</sub> and on a dry basis (150 ppmvd at 15% O <sub>2</sub> ), while firing natural gas or No. 2 fuel oil or 0.8% by weight sulfur (8,000 ppmw) in natural gas or No. 2 fuel oil

### Testing [15A NCAC 02Q .0508(f)]

- c. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A.2.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

### Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- d. The Permittee is subject to the following monitoring and recordkeeping requirements:
  - i. As per §60.334(a), for these sources (**ID Nos. Unit 1 through Unit 3**) which are using water injection to control NO<sub>x</sub> emissions, the Permittee shall install, calibrate, maintain and operate a continuous monitoring system to monitor and record fuel consumption and the ratio of water to fuel being fired. If the fuel consumption or the ratio of water to fuel being fired is not monitored and recorded continuously for each source (**ID Nos. Unit 1 through Unit 3**), the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524. If any unit operating hour, excluding the unit operating hour during start-up, shut-down or malfunction, for which the average water to fuel ratio, as measured by the continuous monitoring system, falls below the acceptable water to fuel ratio needed to demonstrate compliance with the limit given in Section 2.1 A.2.b above, as established during the performance test required in §60.8 or any performance test required in Appendix E to Part 75, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524. If any unit operating hour, including the unit operating hour during start-up, shut-down or malfunction, for which the average water to fuel ratio, as measured by the continuous monitoring system, falls below the acceptable water to fuel ratio needed to demonstrate compliance with the limit given in Section 2.1 A.2.b above, as established during the performance test required in §60.8 or any performance test required in Appendix E to Part 75, the

<sup>1</sup> Emission limit of nitrogen oxides for these sources (**ID Nos. Unit 1 through Unit 3**) is based upon manufacturer's rated heat rates of 9,330 Btu/kW-hr for No. 2 fuel oil and 9,290 Btu/kW-hr for natural gas, at a peak load of 100%. The emission limit accounts for no credit for fuel-bound nitrogen in either natural gas or No. 2 fuel oil (i.e., F = 0% by volume).

Permittee may be deemed in noncompliance with 15A NCAC 02D .0524, specifically, with the requirements of 40 CFR §60.11(d).

- ii. As per §60.334(b), for these sources (**ID Nos. Unit 1 through Unit 3**) which have commenced construction, reconstruction or modification after October 3, 1977 but before July 8, 2004, and which uses water injection to control NO<sub>x</sub> emissions, as an alternative to operating the continuous monitoring system described in Section 2.1 A.2.d.i above, the Permittee may install, certify, maintain, operate, and quality-assure a continuous emission monitoring system (CEMS) consisting of NO<sub>x</sub> and O<sub>2</sub> monitors, according to the requirements of 40 CFR 60 Appendix B or 40 CFR 75. The CEMS shall comply with all applicable requirements of §60.334(b). If the CEMS does not comply with the requirements of §60.334(b) or the NO<sub>x</sub> emissions from these turbines exceed the emission limit in Section 2.1 A.2.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.
- iii. As per §60.334(c), for these sources (**ID Nos. Unit 1 through Unit 3**) which have commenced construction, reconstruction or modification after October 3, 1977, but before July 8, 2004, and which does not use water injection to control NO<sub>x</sub> emissions, the Permittee may, for purposes of determining excess emissions, use a CEMS that meets the requirements of §60.334(b). The Permittee has previously submitted and received DAQ approval of a petition for an alternative procedure in 40 CFR 75 Appendix E, for continuously monitoring compliance with the applicable NO<sub>x</sub> emission limit in Section 2.1 A.2.b above. Hence, as an alternate to the requirement to use CEMS to monitor NO<sub>x</sub> emissions, the Permittee has elected to continue to use the approved procedure in 40 CFR 75 Appendix E. If the Permittee does not comply with the requirements of 40 CFR 75 Appendix E or the monitoring under 40 CFR 75 Appendix E indicates NO<sub>x</sub> emissions except during start-up, shutdown, and malfunction from the turbines exceed the emission limit in Section 2.1 A.2.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.
- iv. As per §60.334(g), the water to fuel ratio that is required to be continuously monitored for these sources (**ID Nos. Unit 1 through Unit 3**) in Section 2.1 A.2.d.i above, shall be monitored during the performance test required under §60.8, to establish acceptable values and ranges. The Permittee may supplement the performance test data with engineering analyses, design specifications, manufacturer's recommendations and other relevant information to define the acceptable parametric ranges more precisely. The Permittee shall develop and keep on-site a parameter monitoring plan, which explains the procedures used to document proper operation of the NO<sub>x</sub> emission controls. The plan shall include the parameter(s) monitored and the acceptable range(s) of the parameter(s) as well as the basis for designating the parameter(s) and acceptable range(s). Any supplemental data such as engineering analyses, design specifications, manufacturer's recommendations and other relevant information shall be included in the monitoring plan. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the parameter monitoring plan is not developed or kept on-site. If these sources (**ID Nos. Unit 1 through Unit 3**) are also subject to 40 CFR 75 and that use the low mass emissions methodology in 75.19 or the NO<sub>x</sub> emission measurement methodology in Appendix E to 40 CFR 75, the Permittee may meet the requirements of this Section by developing and keeping on-site (or at a central location for unmanned facilities) a quality-assurance plan, as described in 75.19(e)(5) or in Section 2.3 of Appendix E and Section 1.3.6 of Appendix B to 40 CFR 75. If the Permittee does not comply with the requirements of 75.19 or Appendix E to 40 CFR 75, as applicable, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.
- v. As per §60.334(h)(2), monitoring for nitrogen content of the natural gas and fuel oil, combusted in these sources (**ID Nos. Unit 1 through Unit 3**) is not required<sup>2</sup>.
- vi. As per §60.334(h)(3), the Permittee may elect not to monitor the total sulfur content of the natural gas

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2 The Permittee has not claimed any credit for fuel bound nitrogen in either natural gas or fuel oil for establishing the emission limit for NO<sub>x</sub>.

combusted in these sources (**ID Nos. Unit 1 through Unit 3**), even though a DAQ approved existing custom fuel monitoring schedule requires the Permittee to monitor natural gas combusted in these sources (**ID Nos. Unit 1 through Unit 3**) using the procedures of 40 CFR 75 Appendix D. If the provision of this Section is elected, the Permittee shall use one of the following sources of information to make the required demonstration that the gaseous fuel combusted in these sources (**ID Nos. Unit 1 through Unit 3**) does qualify as a natural gas in §60.331(u):

- A. The gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, specifying that the maximum total sulfur content of the fuel is 20 grains/100 scf or less; or
- B. Representative fuel sampling data, which show that the sulfur content of the gaseous fuel does not exceed 20 grains/100 scf. At a minimum, the amount of fuel sampling data specified in Section 2.3.1.4 or 2.3.2.4 of Appendix D to 40 CFR 75 is required.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524, if the gaseous fuel fired in the combustion turbines does not qualify as a natural gas in §60.331(u) or the Permittee does not make the above demonstration, or the SO<sub>2</sub> emissions, excluding the emissions during start-up, shutdown, and malfunction from the turbines exceed the emission limit in Section 2.1 A.2.b above.

- vii. As per §60.334(h)(4) and the DAQ approved custom fuel monitoring schedule, for these sources (**ID Nos. Unit 1 through Unit 3**), the Permittee shall sample each tank of fuel oil to determine sulfur content after all shipments have been transferred into the tank and prior to placing the tank in service for supply to the turbines. Samples for fuel oil shall be analyzed for sulfur content in accordance with 40 CFR Part 75, Appendix D.
  - A. After each tank of fuel oil demonstrates initial compliance with the sulfur content limit and has been placed into service, the Permittee shall monitor the sulfur content of future fuel oil shipments by obtaining vendor certification that the sulfur content of the delivered fuel oil is lower than 8,000 ppmw.
  - B. If the Permittee accepts a delivery of fuel oil with a sulfur content of greater than 8,000 ppmw, the Permittee shall sample each fuel tank as required by Paragraph 2.1.A.2.d.vii, above.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524, if the fuel oil or natural gas fired in the combustion turbines does not comply with the sulfur content limit in Section 2.1 A.2.b above or the SO<sub>2</sub> emissions excluding the emissions during start-up, shutdown, and malfunction from these turbines exceed the emission limit in Section 2.1 A.2.b above, or the Permittee does not comply with the requirements of DAQ approved custom fuel monitoring schedule.

**Reporting** [15A NCAC 02Q .0508(f)]

- e. The Permittee is required to REPORT to the Regional Supervisor, DAQ, in WRITING, of the following:
  - i. For each source (**ID Nos. Unit 1 through Unit 3**), required to continuously monitor parameters or emissions, or to periodically determine the fuel sulfur content or fuel nitrogen content under 40 CFR 60 Subpart GG, the Permittee shall submit reports of excess emissions and monitor downtime, in accordance with §60.7(c). Excess emissions shall be reported for all periods of unit operation, including startup, shutdown and malfunction. For the purpose of reports required under §60.7(c), periods of excess emissions and monitor downtime that shall be reported are defined below [60.334(j)]:
    - A. When using water to fuel ratio monitoring, excess emissions for NO<sub>x</sub> shall be defined as any unit operating hour for which the average water to fuel ratio, as measured by the continuous monitoring system, falls below the acceptable water to fuel ratio needed to demonstrate compliance with Section

- 2.1 A.2.b above, as established during the performance test required in §60.8 or any performance test required in Appendix E to Part 75. Any unit operating hour in which no water is injected into the turbine shall also be considered an excess emission [60.334(j)(1)(i)(A)].
- B. When using water to fuel ratio monitoring, a period of monitor downtime for NO<sub>x</sub> shall be defined as any unit operating hour in which water is injected into the turbine, but the essential parametric data needed to determine water to fuel ratio are unavailable or invalid [60.334(j)(1)(i)(B)].
- C. When using water to fuel ratio monitoring, each excess emission report for NO<sub>x</sub> shall include the average water to fuel ratio, average fuel consumption, ambient conditions (temperature, pressure, and humidity), gas turbine load, and (if applicable) the nitrogen content of the fuel during each excess emission. The Permittee does not have to report ambient conditions, if Permittee opts to use the worst case ISO correction factor as specified in §60.334(b)(3)(ii), or if Permittee is not using the ISO correction equation under the provisions of §60.335(b)(1) [60.334(j)(1)(i)(C)].
- D. When using NO<sub>x</sub> and diluent CEMS, excess emissions for NO<sub>x</sub> shall be defined as any unit operating hour in which the 4-hour rolling average NO<sub>x</sub> concentration exceeds the emission limit in Section 2.1 A.2.b above. For the purposes of this Subpart, a “4-hour rolling average NO<sub>x</sub> concentration” is the arithmetic average of the average NO<sub>x</sub> concentration measured by the CEMS for a given hour (corrected to 15 percent O<sub>2</sub>) and the three unit operating hour average NO<sub>x</sub> concentrations immediately preceding that unit operating hour [60.334(j)(1)(ii)(A)].
- E. When using NO<sub>x</sub> and diluent CEMS, a period of monitor downtime for NO<sub>x</sub> shall be defined as any unit operating hour in which sufficient data are not obtained to validate the hour, for either NO<sub>x</sub> concentration or diluent (or both) [60.334(j)(1)(iii)(B)].
- F. When using NO<sub>x</sub> and diluent CEMS, each excess emission report for NO<sub>x</sub> shall include the ambient conditions (temperature, pressure, and humidity) at the time of the excess emission period and (if the owner or operator has claimed an emission allowance for fuel bound nitrogen) the nitrogen content of the fuel during the period of excess emissions. The Permittee does not have to report ambient conditions, because the Permittee has elected not to use the optional ISO correction equation [60.334(j)(1)(iii)(C)].
- G. When not using water to fuel ratio monitoring and not using NO<sub>x</sub> and diluent CEMS, excess emissions for NO<sub>x</sub> shall be defined as 4-hour rolling unit operating hour average in which any monitored parameter does not achieve the target value or is outside the acceptable range in the quality assurance plan in Section 2.3 of Appendix E to 40 CFR 75.
- H. When not using water to fuel ratio monitoring and not using NO<sub>x</sub> and diluent CEMS, a period of monitor downtime shall be a unit operating hour in which any of the required parametric data are either not recorded or are invalid.
- I. When the Permittee is required to monitor the sulfur content of the fuel in Section 2.1 A.2.d.vii above, excess emissions for SO<sub>2</sub>, while sampling of gaseous fuel and fuel oil samples obtained using daily sampling, flow proportional sampling, or sampling from the unit's storage tank, shall be defined as each unit operating hour included in the period beginning on the date and hour of any sample for which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8 weight percent and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit. The requirement of this Section does not apply to natural gas, if the Permittee elects not to monitor the total sulfur content of the natural gas as per Section 2.1 A.2.d.vi above [60.334(j)(2)(i)].
- J. When the Permittee is required to monitor the sulfur content of the fuel in Section 2.1 A.2.d.vii

above, a period of monitor downtime for SO<sub>2</sub> shall begin when a required sample is not taken by its due date. A period of monitor downtime shall also begin on the date and hour of a required sample, if invalid results are obtained. The period of monitor downtime shall include only unit operating hours, and ends on the date and hour of the next valid sample. The requirement of this Section does not apply to natural gas, if the Permittee elects not to monitor the total sulfur content of the natural gas as per Section 2.1 A.2.d.vi above [60.334(j)(2)(iii)].

- ii. The Permittee shall submit all reports required under §60.7(c) for these sources (**ID Nos. Unit 1 through Unit 3**), postmarked by the 30th day following the end of each calendar quarter [60.334(j)(5)].
- iii. For these sources (**ID Nos. Unit 1 through Unit 3**), the Permittee shall submit the results of sampling for sulfur content of No. 2 fuel oil fired, and the natural gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract or the results of sampling of natural gas, as appropriate, postmarked by the 30th day following the end of each calendar quarter.

The quarterly reports, acceptable to the Regional Air Quality Supervisor, shall be postmarked on or before January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and October 30 for the calendar year for the preceding three-month period between July and September.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the reporting requirements in conditions ii. and iii. are not met.

### 3. 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

- a. The following Best Available Control Technology (BACT) limits shall not be exceeded:
  - i. Short term maximum emission rates for each source (**ID No. Unit 1 through Unit 3**) shall not exceed:

AFFECTED SOURCE	POLLUTANT	BACT EMISSION LIMITS <sup>a</sup>		BACT CONTROLS
		Natural Gas	No. 2 Fuel Oil	
<b>Unit 1 through Unit 3</b>	Opacity	20%	20%	combustion control
	Nitrogen oxides	0.045 pounds per million BTU (lb/MMBtu) 10.5 ppmvd <sup>b</sup> (24-hour rolling average) <sup>c</sup>	0.176 lb/MMBtu 42 ppmvd <sup>b</sup> (24-hour rolling average) <sup>c</sup>	natural gas: dry-low NO <sub>x</sub> fuel oil: water injection
	Sulfur dioxide	0.0006 lb/MMBtu	0.0515 lb/MMBtu	0.05% sulfur fuel oil
	Carbon monoxide	0.018 lb/MMBtu 9 ppmvd	0.037 lb/MMBtu 20 ppmvd	combustion control
	VOCs	0.0015 lb/MMBtu 1.4 ppmvw	0.004 lb/MMBtu 3.5 ppmvw	combustion control
	Particulates/PM <sub>10</sub> (front half)	0.0055 lb/MMBtu	0.009 lb/MMBtu	combustion control
	sulfuric acid		fuel oil sulfur content	0.05% sulfur fuel oil

a BACT limits shall apply at all times except as provided under Section 2.1 A.3.a.ii.

b ppmvd = parts per million by volume on a dry basis at 15% O<sub>2</sub>.

- c. 24-hour rolling average is calculated using only actual operating hours (periods of zero emissions when not operating are not included).
- ii. Emissions resulting from start-up, shutdown or malfunction above those given in Section 2.1 A.3.a.i are permitted provided that optimal operational practices are adhered to and periods of excess emissions are minimized. For these sources (**ID Nos. Unit 1 through Unit 3**), periods of excess emissions due to start-up and/or shutdown shall not exceed two hours in any 24-hour block period beginning at midnight.
- (A) When firing fuel oil, "start-up" is defined as the period from initial firing to 50% load, and "shutdown" is defined as the period from 50% load to flame out.
- (B) When firing natural gas, "start-up" is defined as the period from initial firing until the turbine reaches Mode 6 operation, and "shutdown" is defined as the period from when the turbine drops below Mode 6 operation to flame out.
- (C) "Mode 6" is defined by the turbine manufacturer's dry low NOx control system information.
- b. The following emission limits apply in order to demonstrate compliance with the National Ambient Air Quality Standards as required by 15A NCAC 02D .0530; 40 CFR 51.166(k):

AFFECTED SOURCE	POLLUTANT	EMISSION LIMIT				
		Annual (tons/yr) <sup>a</sup>	per 24-hour (lb)	per 8-hour (lb)	per 3-hour (lb)	per 1-hour (lb)
Unit 1 through Unit 5, total	nitrogen dioxide	1,224.4				
	sulfur dioxide	257.3	11,580		1,447.5	
	carbon monoxide			2,680		335
	particulates/PM <sub>10</sub> (front half)	1,25.8	2,040			

- a. Tons per rolling consecutive 12-month period. Annual emissions for the combustion turbines are for all five turbines firing fuel oil for 1,000 hours per year, three simple-cycle turbines firing natural gas for 1,000 hours per year and two combined-cycle turbines firing natural gas for 7,760 hours per year, at 100% load.

**Testing** [15A NCAC 02Q .0508(f)]

- c. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Sections 2.1 A.3.a. and b., above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

**Monitoring/Recordkeeping** [15A NCAC 02Q .0508(f)]

- d. The maximum annual hours of operation for each source (**ID Nos. Unit 1 through Unit 3**) shall not exceed 1,000 full load equivalent hours per rolling consecutive 12-month period when firing No. 2 fuel oil.
- e. The maximum annual hours of operation for each source (**ID Nos. Unit 1 through Unit 3**) shall not exceed 2,000 full load equivalent hours per rolling consecutive 12-month period.
- f. The Permittee shall record and maintain records of the actual number of hours of operation, and the amounts of each fuel burned during each day for each source (**ID Nos. Unit 1 through Unit 3**) in accordance with 40 CFR Part 75. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the above records are not maintained.

- g. Only natural gas shall be burned during summer months (April through October) except during operational curtailment of interruptible transportation, Force Majeure events, malfunctions, functional equipment testing (periods not to exceed one hour per week), and during compliance testing.
- h. No more than three sources (**ID Nos. Unit 1 through Unit 4**) shall burn No. 2 fuel oil simultaneously.
- i. The sulfur content of the No. 2 fuel oil shall not exceed 0.05 percent sulfur by weight.
- j. Water injection shall be used when the sources (**ID Nos. Unit 1 through Unit 4**) are firing No. 2 fuel oil only.
- k. The Permittee shall monitor operations to demonstrate compliance with the BACT emission limits as follows:
  - i. Determine the sulfur content of the fuel being fired in each source (**ID No. Unit 1 through Unit 4**) in accordance with Section 2.1 A.2.d.vii above.
  - ii. Determine nitrogen oxide emissions as specified in 40 CFR Part 75 Appendix E. At least 45 days prior to performing any required initial performance testing required by the procedure in Appendix E, the Permittee must submit a testing protocol to the Regional Supervisor, Division of Air Quality for review and approval prior to performing such tests. Note: If Appendix E is being used in lieu of a NO<sub>x</sub> CEM under the Acid Rain Program, then certification to use Appendix E shall be completed no later than the applicable deadline specified in 40 CFR Part 75.4 pursuant to the requirements in 75.20.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the sulfur content of the fuel is not monitored or the nitrogen oxide emissions are not monitored.

**Reporting** [15A NCAC 02Q .0508(f)]

- l. The Permittee shall submit in writing the following reports postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June:
  - i. periods of excess emissions for sulfur dioxide for any daily period during which the sulfur content of the No. 2 fuel oil being fired exceeds 0.05 percent by weight, within 30 days after each calendar year quarter for the previous 3-month period; and
  - ii. periods of excess emissions for nitrogen oxides for any 24-hour rolling averaging period during which the concentrations exceed 0.045 lb/million Btu (10.5 ppmvd) when firing natural gas and 0.176 lb/million Btu (42 ppmvd) when firing No. 2 fuel oil, as determined by the procedure specified in 40 CFR Part 75 Appendix E, postmarked within 30 days after each calendar year quarter for the previous 3-month period. The 24-hour rolling average is calculated using only actual operating hours (periods of zero emissions when not operating are not included). A valid hourly emission rate shall be calculated for each hour in which at least two NO<sub>x</sub> concentrations are obtained at loads above 50 percent at least 15 minutes apart.



**B.**

- **One natural gas/No. 2 fuel oil-fired combined-cycle internal combustion turbine (ID No. Unit 4) with associated SCR (ID No. Unit 4 SCR)**
- **One natural gas-fired combined-cycle internal combustion turbine (ID No. Unit 5) with associated SCR (ID No. Unit 5 SCR)**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Visible emissions	20 percent opacity	15A NCAC 02D .0521
Sulfur dioxide Nitrogen oxides	As defined in specific condition	15A NCAC 02D .0524 (40 CFR 60 Subpart GG)
Opacity, Nitrogen oxides, Sulfur dioxide, Carbon monoxide, Volatile organic compounds, Particulates/PM <sub>10</sub> , Sulfuric acid, Ammonia	As defined in specific condition	15A NCAC 02D .0530
Nitrogen oxides, Carbon monoxide, Volatile organic compounds, Particulates, PM <sub>10</sub> , PM <sub>2.5</sub> , Sulfur dioxide,	As defined in specific condition	15A NCAC 02D .0530(u)
Hazardous air pollutants	National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines -No requirements per 63.6090(b)(4)	15A NCAC 02D .1111 (40 CFR 63, Subpart YYYY)
Nitrogen oxides	Phase II Acid Rain Permit Requirements See Section 2.2	15A NCAC 02Q .0402 (40 CFR Part 72)
	(Federally Enforceable Only) Cross State Air Pollution Rule Requirements See Section 2.3.	40 CFR Part 97, Subparts AAAAA and BBBBB
Sulfur dioxide	Phase II Acid Rain Permit Requirements See Section 2.2	15A NCAC 02Q .0402 (40 CFR Part 72)
	(Federally Enforceable Only) Cross State Air Pollution Rule Requirements See Section 2.3.	40 CFR Part 97, Subpart CCCCC

### 1. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

- Visible emissions from these sources (**ID Nos. Unit 4 and Unit 5**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent

not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

**Testing** [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 B.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

**Monitoring/Recordkeeping** [15A NCAC 02Q .0508(f)]

- c. No monitoring/recordkeeping is required for visible emissions from the firing of natural gas in these sources (**ID Nos. Unit 4 and Unit 5**).
- d. i. To ensure compliance, prior to this source (**ID No. Unit 4**) operating more than 1,100 hours using No. 2 fuel oil and for each subsequent 1,100 hours of operation after the last test (excluding any hours while firing natural gas), the Permittee shall observe the emission points of this source (**ID Nos. Unit 4**) for any visible emissions above normal. The observations must be made for each 1,100 operating hour period to ensure compliance with this requirement. If visible emissions are observed to be above normal, the Permittee shall either:
  - (A) take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
  - (B) demonstrate that the percent opacity from the emissions points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 B.1.a above.
- ii. The Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521 if:
  - (A) the above-normal emissions are not corrected per d.i.(A) above;
  - (B) if the demonstration in d.i.(B) above cannot be made; or
  - (C) the 1,100 hours of operation using No. 2 fuel oil observations are not conducted per d.i above.
- e. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
  - i. the date and time of each recorded action;
  - ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
  - iii. the results of any corrective actions performed.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

**Reporting** [15A NCAC 02Q .0508(f)]

- f. No reporting is required for visible emissions from the firing of natural gas in these sources (**ID Nos. Unit 4 and Unit 5**).
- g. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Section 2.1 B.1.d and e above postmarked on or before January 30 of each calendar year for the preceding

six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

## 2. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS (40 CFR Part 60, Subpart GG)

- a. For these sources (**ID Nos. Unit 4 and Unit 5**), the Permittee shall comply with all applicable provisions, including the requirements for emission standards, notification, testing, reporting, recordkeeping, and monitoring in accordance with 15A NCAC 02D .0524, "New Source Performance Standards (NSPS)" as promulgated in 40 CFR Part 60, Subpart GG, including Subpart A "General Provisions."
- b. As required by 15A NCAC 02D .0524, for these sources (**ID Nos. Unit 4 and Unit 5**), the Permittee shall comply with the following emission standards at all times, except during start-up, shutdown, and malfunction:

Affected Facility	Pollutant	Emission Limits
Unit 4 and Unit 5	Nitrogen oxides	0.011% by volume at 15% O <sub>2</sub> and on a dry basis (110 ppmvd at 15% O <sub>2</sub> ), while firing natural gas or No. 2 fuel oil <sup>3</sup>
Unit 4 and Unit 5	Sulfur dioxide	0.015% by volume at 15% O <sub>2</sub> and on a dry basis (150 ppmvd at 15% O <sub>2</sub> ), while firing natural gas or No. 2 fuel oil or 0.8% by weight sulfur (8,000 ppmw) in natural gas or No. 2 fuel oil

### Testing [15A NCAC 02Q .0508(f)]

- c. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 B.2.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

### Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- d. The Permittee is subject to the following monitoring and recordkeeping requirements:
  - i. As per §60.334(b), for these sources (**ID Nos. Unit 4 and Unit 5**) which have commenced construction, reconstruction or modification after October 3, 1977 but before July 8, 2004, and which uses water injection to control NO<sub>x</sub> emissions, as an alternative to operating the continuous monitoring system described in §60.334(a), the Permittee has elected to install, certify, maintain, operate, and quality-assure a continuous emission monitoring system (CEMS) consisting of NO<sub>x</sub> and O<sub>2</sub> monitors, according to the requirements of 40 CFR 60 Appendix B or 40 CFR 75. The CEMS shall comply with all applicable requirements of §60.334(b). If the CEMS does not comply with the requirements of §60.334(b) or the NO<sub>x</sub> emissions excluding the emissions during start-up, shutdown, and malfunction from the turbines exceed the emission limit in Section 2.1 B.2.b. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

If the NO<sub>x</sub> emissions during start-up, shutdown, and malfunction from the turbines exceed the emission

<sup>3</sup> Emission limit of nitrogen oxides for these sources (**ID Nos. Unit 4 and Unit 5**) is based upon manufacturer's rated heat rates of 9,330 Btu/kW-hr for No. 2 fuel oil and 9,290 Btu/kW-hr for natural gas, at a peak load of 100%. The emission limit accounts for no credit for fuel-bound nitrogen in either natural gas or No. 2 fuel oil (i.e., F = 0% by volume).

limit in Section 2.1 B.2.b above, the Permittee may be deemed in noncompliance with 15A NCAC 02D .0524, specifically with the requirements of 40 CFR §60.11(d).

- ii. As per §60.334(c), for these sources (**ID Nos. Unit 4 and Unit 5**) which have commenced construction, reconstruction or modification after October 3, 1977, but before July 8, 2004, and which does not use water injection to control NO<sub>x</sub> emissions, the Permittee has elected, for purposes of determining excess emissions, a CEMS that meets the requirements of §60.334(b). If the CEMS does not comply with the requirements of §60.334(b) or the NO<sub>x</sub> emissions excluding the emissions during start-up, shutdown, and malfunction from the turbines exceed the emission limit in Section 2.1 B.2.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

If the NO<sub>x</sub> emissions during start-up, shutdown, and malfunction from the turbines exceed the emission limit in Section 2.1 B.2.b above, the Permittee may be deemed in noncompliance with 15A NCAC 02D .0524, specifically with the requirements of 40 CFR §60.11(d).

- iii. As per §60.334(h)(2), monitoring for nitrogen content of the natural gas and fuel oil, combusted in these sources (**ID Nos. Unit 4 and Unit 5**) is not required<sup>4</sup>.
- iv. As per §60.334(h)(3), the Permittee may elect not to monitor the total sulfur content of the natural gas combusted in these sources (**ID Nos. Unit 4 and Unit 5**), even though a DAQ approved existing custom fuel monitoring schedule requires the Permittee to monitor natural gas combusted in these sources (**ID Nos. Unit 4 and Unit 5**) using the procedures of 40 CFR 75 Appendix D. If the provision of this Section is elected, the Permittee shall use one of the following sources of information to make the required demonstration that the gaseous fuel combusted in these sources (**ID Nos. Unit 4 and Unit 5**) does qualify as a natural gas in §60.331(u):

- A. The gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, specifying that the maximum total sulfur content of the fuel is 20 grains/100 scf or less; or
- B. Representative fuel sampling data, which show that the sulfur content of the gaseous fuel does not exceed 20 grains/100 scf. At a minimum, the amount of fuel sampling data specified in Section 2.3.1.4 or 2.3.2.4 of Appendix D to 40 CFR 75 is required.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524, if the gaseous fuel fired in these sources (**ID Nos. Unit 4 and Unit 5**) does not qualify as a natural gas in §60.331(u) or the Permittee does not make the above demonstration, or the SO<sub>2</sub> emissions excluding the emissions during start-up, shutdown, and malfunction from the turbines exceed the emission limit in Section 2.1 B.2.b above.

- v. As per §60.334(h)(4) and the DAQ approved custom fuel monitoring schedule, for these sources (**ID Nos. Unit 4 and Unit 5**), the Permittee shall sample each tank of fuel oil to determine sulfur content after all shipments have been transferred into the tank and prior to placing the tank in service for supply to the turbines. Samples for fuel oil shall be analyzed for sulfur content in accordance with 40 CFR Part 75, Appendix D.
  - A. After each tank of fuel oil demonstrates initial compliance with the sulfur content limit and has been placed into service, the Permittee shall monitor the sulfur content of future fuel oil shipments by obtaining vendor certification that the sulfur content of the delivered fuel oil is lower than 8,000 ppmw.
  - B. If the Permittee accepts a delivery of fuel oil with a sulfur content of greater than 8,000 ppmw, the

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<sup>4</sup> The Permittee has not claimed any credit for fuel bound nitrogen in either natural gas or fuel oil for establishing the emission limit for NO<sub>x</sub>.

Permittee shall sample each fuel tank as required by Paragraph 2.1.B.2.d.v, above.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524, if the fuel oil or natural gas fired in these sources (**ID Nos. Unit 4 and Unit 5**) does not comply with the sulfur content limit in Section 2.1 B.2.b above or the SO<sub>2</sub> emissions, excluding the emissions during start-up, shutdown, and malfunction from these sources (**ID Nos. Unit 4 and Unit 5**) exceed the emission limit in Section 2.1 B.2.b above, or the Permittee does not comply with the requirements of DAQ approved custom fuel monitoring schedule.

**Reporting** [15A NCAC 02Q .0508(f)]

- e. The Permittee is required to REPORT to the Regional Supervisor, DAQ, in WRITING, of the following:
  - i. For each affected unit (**ID Nos. Unit 4 and Unit 5**), required to continuously monitor parameters or emissions, or to periodically determine the fuel sulfur content or fuel nitrogen content under 40 CFR 60 Subpart GG, the Permittee shall submit reports of excess emissions and monitor downtime, in accordance with §60.7(c). Excess emissions shall be reported for all periods of unit operation, including startup, shutdown and malfunction. For the purpose of reports required under §60.7(c), periods of excess emissions and monitor downtime that shall be reported are defined below [§60.334(j)]:
    - A. When using NO<sub>x</sub> and diluent CEMS, excess emissions for NO<sub>x</sub> shall be defined as any unit operating hour in which the 4-hour rolling average NO<sub>x</sub> concentration exceeds the emission limit in Section 2.1 B.2.b above. For the purposes of this Subpart, a “4-hour rolling average NO<sub>x</sub> concentration” is the arithmetic average of the average NO<sub>x</sub> concentration measured by the CEMS for a given hour (corrected to 15 percent O<sub>2</sub>) and the three unit operating hour average NO<sub>x</sub> concentrations immediately preceding that unit operating hour [§60.334(j)(1)(iii)(A)].
    - B. When using NO<sub>x</sub> and diluent CEMS, a period of monitor downtime for NO<sub>x</sub> shall be defined as any unit operating hour in which sufficient data are not obtained to validate the hour, for either NO<sub>x</sub> concentration or diluent (or both) [§60.334(j)(1)(iii)(B)].
    - C. When using NO<sub>x</sub> and diluent CEMS, each excess emission report for NO<sub>x</sub> shall include the ambient conditions (temperature, pressure, and humidity) at the time of the excess emission period and (if the owner or operator has claimed an emission allowance for fuel bound nitrogen) the nitrogen content of the fuel during the period of excess emissions. The Permittee does not have to report ambient conditions, because the Permittee has elected not to use the optional ISO correction equation [§60.334(j)(1)(iii)(C)].
    - D. When the Permittee is required to monitor the sulfur content of the fuel in Section 2.1 B.2.d.v above, excess emissions for SO<sub>2</sub>, while sampling of gaseous fuel and fuel oil samples obtained using daily sampling, flow proportional sampling, or sampling from the unit's storage tank, shall be defined as each unit operating hour included in the period beginning on the date and hour of any sample for which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8 weight percent and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit. The requirement of this Section does not apply to natural gas, if the Permittee elects not to monitor the total sulfur content of the natural gas as per Section 2.1 B.2.d.iv above [§60.334(j)(2)(i)].
    - E. When the Permittee is required to monitor the sulfur content of the fuel in Section 2.1 B.2.d.v above, a period of monitor downtime for SO<sub>2</sub> shall begin when a required sample is not taken by its due date. A period of monitor downtime shall also begin on the date and hour of a required sample, if invalid results are obtained. The period of monitor downtime shall include only unit operating hours, and ends on the date and hour of the next valid sample. The requirement of this Section does not apply to natural gas, if the Permittee elects not to monitor the total sulfur content of the natural gas as per Section 2.1 B.2.d.iv above [§60.334(j)(2)(iii)].

- ii. The Permittee shall submit all reports required under §60.7(c) for these sources (**ID Nos. Unit 4 and Unit 5**), postmarked by the 30th day following the end of each calendar quarter [§60.334(j)(5)].
- iii. For these sources (**ID Nos. Unit 4 and Unit 5**), the Permittee shall submit the results of sampling for sulfur content of No. 2 fuel oil fired, and the natural gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract or the results of sampling of natural gas, as appropriate, postmarked by the 30th day following the end of each calendar quarter.
- iv. All instances of deviations from the requirements of this permit must be clearly identified.

The quarterly reports, acceptable to the Regional Air Quality Supervisor, shall be postmarked on or before January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and October 30 for the calendar year for the preceding three-month period between July and September.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the reporting requirements in conditions ii. and iii. are not met.

### 3. 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

- a. The following Best Available Control Technology (BACT) limits shall not be exceeded:
  - i. Short term maximum emission rates for each source (**ID No. Unit 4 and Unit 5**) shall not exceed:

AFFECTED SOURCE	POLLUTANT	BACT EMISSION LIMITS <sup>a</sup>		BACT CONTROLS
		Natural Gas	No. 2 Fuel Oil	
<b>Unit 4 and Unit 5</b>	Opacity	20%	20%	combustion control
	nitrogen oxides	0.010 pounds per million BTU (lb/MMBtu) 2.5 ppmvd <sup>b</sup> (24-hour rolling average) <sup>c,d</sup>	0.054 lb/MMBtu 13 ppmvd <sup>b</sup> (24-hour rolling average) <sup>c,e</sup>	natural gas: dry-low NOx and SCR  fuel oil: water injection and SCR
	sulfur dioxide	0.0006 lb/MMBtu	0.054 lb/MMBtu	0.05% sulfur fuel oil
	carbon monoxide	0.018 lb/MMBtu 9 ppmvd	0.037 lb/MMBtu 20 ppmvd	combustion control
	VOC	0.00172 lb/MMBtu 1.4 ppmvw	0.004 lb/MMBtu 3.5 ppmvw	combustion control
	particulates/PM <sub>10</sub> (front half)	0.0055 lb/MMBtu	0.009 lb/MMBtu	combustion control
	sulfuric acid		fuel oil sulfur content	0.05% sulfur fuel oil
	ammonia	10 ppmvd	10 ppmvd	

a BACT limits shall apply at all times except as provided under Section 2.1 B.3.a.ii BACT limits for No. 2 fuel oil firing are applicable to Unit 4 only and are not applicable to Unit 5.

b ppmvd = parts per million by volume on a dry basis at 15% O<sub>2</sub>.

- c 24-hour rolling average is calculated using only actual operating hours (periods of zero emissions when not operating are not included).
- d The NO<sub>x</sub> emission limit is 2.5 ppmvd for the first 500 hours of operation (on a 24-hour rolling average basis). After 500 hours, the emission limit is 3.5 ppmvd (on a 24-hour rolling average basis). However, the ammonia injection rate shall not exceed that rate established per Section 2.1 B.3.j.i at each load point. Three months after the 24-hour rolling average exceeds 3.3 ppmvd three times within any rolling 50-hour period, the emission limit changes to 2.5 ppmvd for the next 500 hours of operation. However, the Permittee will not be deemed to be out of compliance until the 24-hour rolling average exceeds 3.5 ppmvd during this three-month period. After any 500-hour period where the 2.5 ppmvd is maintained without exceedance of the 3.3 ppmvd trigger level, the limit reverts back to 3.5 ppmvd.
- e The NO<sub>x</sub> emission limit is 13 ppmvd for the first 500 hours of operation (on a 24-hour rolling average basis). After 500 hours, the emission limit is 18 ppmvd (on a 24-hour rolling average basis). However, the ammonia injection rate shall not exceed that rate established per Section 2.1 B.3.j.i at each load point. Three months after the 24-hour rolling average exceeds 17 ppmvd three times within any rolling 50-hour period, the emission limit changes to 13 ppmvd for the next 500 hours of operation. However, the Permittee will not be deemed to be out of compliance until the 24-hour rolling average exceeds 18 ppmvd during this three-month period. After any 500-hour period where the 13 ppmvd is maintained without exceedance of the 17 ppmvd trigger level, the limit reverts back to 18 ppmvd.
- ii. Emissions resulting from start-up, shutdown or malfunction above those given in Section 2.1 B.3.a.i are permitted provided that optimal operational practices are adhered to and periods of excess emissions are minimized. For these sources (**ID Nos. Unit 4 and Unit 5**), periods of excess emissions due to start-up and/or shutdown shall not exceed two hours in any 24-hour block period beginning at midnight.
  - (A) When firing fuel oil, "start-up" is defined as the period from initial firing to 50% load, and "shutdown" is defined as the period from 50% load to flame out.
  - (B) When firing natural gas, "start-up" is defined as the period from initial firing until the turbine reaches Mode 6 operation, and "shutdown" is defined as the period from when the turbine drops below Mode 6 operation to flame out.
  - (C) "Mode 6" is defined by the turbine manufacturer's dry low NO<sub>x</sub> control system information.
- b. The following emission limits apply in order to demonstrate compliance with the National Ambient Air Quality Standards as required by 15A NCAC 02D .0530; 40 CFR 51.166(k):

AFFECTED SOURCE	POLLUTANT	EMISSION LIMIT				
		Annual (tons/yr) <sup>a</sup>	per 24-hour (lb)	per 8-hour (lb)	per 3-hour (lb)	per 1-hour (lb)
Unit 1 through Unit 5, total	nitrogen dioxide	1,224.4				
	sulfur dioxide	257.3	11,580		1,447.5	
	carbon monoxide			2,680		335
	particulates/PM <sub>10</sub> (front half)	125.8	2,040			

- a Tons per rolling consecutive 12-month period. Annual emissions for the combustion turbines are for all five turbines firing fuel oil for 1,000 hours per year, three simple-cycle turbines firing natural gas for 1,000 hours per year and two combined-cycle turbines firing natural gas for 7,760 hours per year, at 100% load.

**Testing** [15A NCAC 02Q .0508(f)]

- c. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Sections 2.1 B.3.a and b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

**Monitoring/Recordkeeping** [15A NCAC 02Q .0508(f)]

- d. The maximum annual hours of operation for this source (**ID No. Unit 4**) shall not exceed 1,000 full load equivalent hours per rolling consecutive 12-month period when firing No. 2 fuel oil.
- e. The Permittee shall record and maintain records of the actual number of hours of operation, and the amounts of each fuel burned during each day for each source (**ID Nos. Unit 4 and Unit 5**) in accordance with 40 CFR Part 75. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the above records are not maintained.
- f. Only natural gas shall be burned during summer months (April through October) except during operational curtailment of interruptible transportation, Force Majeure events, malfunctions, functional equipment testing (periods not to exceed one hour per week), and during compliance testing.
- g. No more than three sources (**ID Nos. Unit 1 through Unit 4**) shall burn No. 2 fuel oil simultaneously.
- h. The sulfur content of the No. 2 fuel oil shall not exceed 0.05 percent sulfur by weight.
- i. Water injection shall be used when the sources (**ID Nos. Units 1 through Unit 4**) are firing No. 2 fuel oil only.
- j. For each source (**ID Nos. Unit 4 and Unit 5**), compliance with the BACT NO<sub>x</sub> and ammonia limits shall be demonstrated as follows for the selective catalytic reduction (SCR) system:
  - i. The Permittee shall install and operate an ammonia flow meter to measure and record the ammonia injection rate to the SCR system. The ammonia injection rates corresponding to a maximum ammonia slip of 10 ppmvd and necessary to comply with the BACT NO<sub>x</sub> limits shall be established (and made available to the Division of Air Quality upon request) during the most recent performance tests when firing No. 2 fuel oil and natural gas at 50, 70, 85 and 100 percent of peak load. During periods of performance testing, the Permittee may adjust the ammonia injection rate as needed to re-establish an ammonia injection rate curve that demonstrates compliance with the BACT NO<sub>x</sub> limit.
  - ii. The SCR shall operate at all times that the turbine is operating except during turbine start-up and shutdown periods to the extent recommended by the manufacturer and operated in a manner so as to minimize ammonia slip.
  - iii. During periods of NO<sub>x</sub> CEM downtimes or malfunctions, the Permittee shall operate the SCR system with the ammonia injection rate determined to demonstrate compliance for the appropriate load as specified in Section 2.1 B.3.j.i.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the nitrogen oxide emissions are not monitored using CEMs, as required in Section 2.1 B.2.d.i and ii above or the ammonia injection rate to the SCR system is not continuously measured and recorded, as required in Section 2.1 B.3.j.i above or nitrogen oxide or ammonia emission rate of combustion turbine is above the limit given in Sections 2.1 B.3.a. and b. above.

- k. Under the provisions of North Carolina General Statute 143-215.108, for each source (**ID Nos. Unit 4 and Unit 5**), the Permittee shall monitor operations to demonstrate compliance with the BACT emission limits as follows:



- i. Determine the sulfur content of the fuel being fired in each combustion turbine in accordance with Section 2.1 B.2.d.v above.
- ii. Determine nitrogen oxide emissions as specified in Section 2.1 B.2.d.i and ii above.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the records required in Section 2.1 B.2.d.i and ii above are not kept or the nitrogen oxide emission rate of combustion turbine is above the limit given in Sections 2.1 B.3.a. and b above.

**Reporting** [15A NCAC 02Q .0508(f)]

1. The Permittee shall submit in writing the following reports postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June:
  - i. periods of excess emissions for sulfur dioxide for any daily period during which the sulfur content of the No. 2 fuel oil being fired exceeds 0.05 percent by weight; and
  - ii. periods of excess emissions (calculated according to the requirements of 40 CFR §60.13(h)) and monitoring systems performance report and/or a summary report form and monitoring report for the nitrogen oxide CEMS. Written reports shall include information required in 40 CFR §60.7(c) and (d). This report shall also contain the emission limitation as specified in Section 2.1 B.3.a.i above.

**4. 15A NCAC 02D .0530(u): PREVENTION OF SIGNIFICANT DETERIORATION**

- a. The Permittee has used projected actual emissions to avoid applicability of prevention of significant deterioration requirements for a peak fire software update for the combustion turbines (**ID Nos. Unit 4 and Unit 5**). The Permittee shall comply with the following record keeping and reporting requirements.

**Monitoring/Recordkeeping** [15A NCAC 02Q .0508(f)]

- b. The Permittee shall calculate and maintain records of annual emissions for nitrogen oxides, carbon monoxide, volatile organic compounds, particulates, PM<sub>10</sub>, PM<sub>2.5</sub>, and sulfur dioxide in tons per year on a calendar year basis related to the modification for five years following the resumption of regular operations after the peak fire software update for the combustion turbines (**ID Nos. Unit 4 and Unit 5**). The Permittee shall make the information, documented and maintained in this Section 2.1 B.4.b, available to the Director or the general public pursuant to the requirements in 40 CFR 70.4(b)(3)(viii). The Permittee may combine this recordkeeping requirement with the recordkeeping required by Section 2.1 B.5.b.
  - i. The first reporting year is CY2016.
  - ii. The last reporting year is CY2020.

**Reporting** [15A NCAC 02Q .0508(f)]

- c. The Permittee shall submit a report to the Director within 60 days after the end of each calendar year during which the records in Section 2.1 B.4.b must be kept. The report shall contain the items listed in 40 CFR 51.166(r)(6)(v)(a) through (c). The Permittee may combine this report with the report required by Section 2.1 B.5.c.

The reported actual emissions (post-construction emissions, including any demand growth) for each of the five calendar years will be compared to the following projected actual emissions (pre-construction projection, including any demand growth) as included in the Plant Rowan County permit application 8000163.15A:

<b>Pollutant</b>	<b>Projected Actual Emissions* (Unit 4 and Unit 5 combined) (tons per year)</b>
Nitrogen oxides	128.1
Carbon monoxide	205.4
Volatile organic compounds	19.6
Particulates (front half)	62.8
PM <sub>10</sub>	116.4
PM <sub>2.5</sub>	116.4
Sulfur dioxide	6.8

\* These projections are not enforceable limitations. If projected emissions are exceeded, consistent with 15A NCAC 02D .0530, the Permittee shall include in its annual report an explanation as to why the actual rates exceeded the projection.

#### **5. 15A NCAC 02D .0530(u): PREVENTION OF SIGNIFICANT DETERIORATION**

- a. The Permittee has used projected actual emissions to avoid applicability of prevention of significant deterioration requirements for the advanced gas path and optimized load path upgrade for the combustion turbines (**ID Nos. Unit 4 and Unit 5**). The Permittee shall comply with the following record keeping and reporting requirements.

##### **Monitoring/Recordkeeping** [15A NCAC 02Q .0508(f)]

- b. The Permittee shall calculate and maintain records of annual emissions for nitrogen oxides, carbon monoxide, volatile organic compounds, particulates, PM<sub>10</sub>, PM<sub>2.5</sub>, and sulfur dioxide in tons per year on a calendar year basis related to the modification for five years following the resumption of regular operations after the upgrade for the combustion turbines (**ID Nos. Unit 4 and Unit 5**). The Permittee shall make the information, documented and maintained in this Section 2.1 B.5.b, available to the Director or the general public pursuant to the requirements in 40 CFR 70.4(b)(3)(viii). The Permittee may combine this recordkeeping requirement with the recordkeeping required by Section 2.1 B.4.b.
- i. The first reporting year is CY2018.
- ii. The last reporting year is CY2022.

##### **Reporting** [15A NCAC 02Q .0508(f)]

- c. The Permittee shall submit a report to the Director within 60 days after the end of each calendar year during which the records in Section 2.1.B.5.b must be kept. The report shall contain the items listed in 40 CFR 51.166(r)(6)(v)(a) through (c). The Permittee may combine this report with the report required by Section 2.1 B.4.c.

The reported actual emissions (post-construction emissions, including any demand growth) for each of the five calendar years will be compared to the following projected actual emissions (pre-construction projection, including any demand growth) as included in the Plant Rowan County permit application 8000163.16C:

<b>Pollutant</b>	<b>Projected Actual Emissions* (Unit 4 and Unit 5 combined) (tons per year)</b>
Nitrogen oxides	134.0
Carbon monoxide	227.6
Volatile organic compounds	21.5

<b>Pollutant</b>	<b>Projected Actual Emissions* (Unit 4 and Unit 5 combined) (tons per year)</b>
Particulates (front half)	69.5
PM <sub>10</sub>	98.6
PM <sub>2.5</sub>	98.6
Sulfur dioxide	7.6

- \* These projections are not enforceable limitations. If projected emissions are exceeded, consistent with 15A NCAC 02D .0530, the Permittee shall include in its annual report an explanation as to why the actual rates exceeded the projection.

**C. One cooling tower with drift eliminators (ID No. Tower 1)**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	$E = 4.10P^{0.67}$ for $P \leq 30$ tons per hour $E = 55.0P^{0.11} - 40$ for $P > 30$ tons per hour  Where: E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 02D .0515
Particulates/PM <sub>10</sub>	Less than 33.12 pounds per day AND Less than 6.0 tons per consecutive rolling 12-month period	15A NCAC 02D .0530

**1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES**

- a. Emissions of particulate matter from this source (**ID No. Tower 1**) shall not exceed an allowable emission rate as calculated by the following equation:

$$E = 4.10 \times P^{0.67} \quad \text{for } P \leq 30 \text{ tons per hour}$$

$$E = 55.0 \times P^{0.11} - 40 \quad \text{for } P > 30 \text{ tons per hour}$$

Where E = allowable emission rate in pounds per hour  
 P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

**Testing** [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 C.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

**Monitoring/Recordkeeping/Reporting** [15A NCAC 02Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for particulate matter emissions from this source (**ID No. Tower 1**).

**2. 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION**

- a. In order to demonstrate compliance with the National Ambient Air Quality Standards as required by 15A NCAC 02D .0530; 40 CFR 51.166(k), particulate/PM<sub>10</sub> emissions from this source (**ID No. Tower 1**) shall not exceed 33.12 pounds per day and 6.0 tons per consecutive rolling 12-month period.

**Monitoring/Recordkeeping/Reporting** [15A NCAC 02Q .0508(f)]

- b. No monitoring/recordkeeping/reporting is required for particulate emissions from this source (**ID No. Tower 1**).

**D. One firetube design natural gas fired auxiliary boiler (ID No. ES-6)**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	0.53 pound per million Btu heat input	15A NCAC 02D .0503
Sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
Visible emissions	20 percent opacity	15A NCAC 02D .0521
None	Recordkeeping	15A NCAC 02D .0524 (40 CFR Part 60, Subpart Dc)
Nitrogen oxides	Annual Boiler Tune-ups Required	15A NCAC 02D .1407
Hazardous Air Pollutants	Best Combustion Practices	15A NCAC 02D .1109 [CAA § 112(j)]
Hazardous Air Pollutants	NESHAP for Boilers and Process Heaters See Section 2.1 D.7.	15A NCAC 02D .1111 (40 CFR Part 63, Subpart 5D)

**1. 15A NCAC 02D .0503: PARTICULATES FROM FUEL BURNING INDIRECT HEAT EXCHANGERS**

- a. Emissions of particulate matter from the combustion of natural gas that are discharged from this source (**ID No. ES-6**) into the atmosphere shall not exceed 0.53 pounds per million Btu heat input.

**Testing** [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 D.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0503.

**Monitoring/Recordkeeping/Reporting** [15A NCAC 02Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for particulate emissions from the firing of natural gas in this source (**ID No. ES-6**).

**2. 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES**

- a. Emissions of sulfur dioxide from this source (**ID No. ES-6**) shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

**Testing** [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 D.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

**Monitoring/Recordkeeping/Reporting** [15A NCAC 02Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from natural gas for this source (**ID No. ES-6**).

**3. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS**

- a. Visible emissions from this source (**ID No. ES-6**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than

once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

**Testing** [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 D.3.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

**Monitoring/Recordkeeping/Reporting** [15A NCAC 02Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for visible emissions from the firing of natural gas in this source (**ID No. ES-6**).

**4. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS**

(40 CFR Part 60, Subpart Dc)

**Recordkeeping** [15A NCAC 02Q .0508(f); 40 CFR §60.48c(g)(2)]

- a. The Permittee shall record and maintain records of the amounts each fuel combusted during each month. Such records shall be maintained for a period of two years following the date of such record. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if these records are not maintained.

**5. 15A NCAC 02D .1407: BOILERS AND INDIRECT PROCESS HEATERS**

- a. Facilities with boilers with maximum heat input rate of less than or equal to 50 million Btu per hour shall comply with the annual tune-up requirements of 15A NCAC 02D .1414. The Permittee shall maintain records of all tune-ups performed for each source according to 15A NCAC 02D .1404.

**Testing** [15A NCAC 02Q .0508(f)]

- b. If emission testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 D.5.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1407.

**Monitoring** [15A NCAC 02D .1414(b), 02Q .0508(f)]

- c. When a tune-up to a boiler or indirect-fired process heater is required for compliance with this Section, the owner or operator shall at least annually (on or by December 31st of each calendar year) and according to the manufacturer's recommendations:
  - i. inspect each burner and clean or replace any component of the burner as required;
  - ii. inspect the flame pattern and make any adjustments to the burner, or burners, necessary to optimize the flame pattern to minimize total emissions of NO<sub>x</sub> and carbon monoxide;
  - iii. inspect the combustion control system to ensure proper operation and correct calibration of components that control the air to fuel ratio and adjust components to meet the manufacturer's established operating parameters; and
  - iv. inspect any other component of the boilers and make adjustments or repairs as necessary to improve combustion efficiency. The Permittee shall perform the tune-up according to a unit specific protocol approved by the Director. The Director (or designee) shall approve the protocol if it meets the requirements of this Rule. The protocol shall be submitted to the Regional Office for approval.

If tune-ups and inspections are not conducted as per c.i. through iv. above, the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .1407.

**Recordkeeping** [15A NCAC .1414(d), 02Q .0508(f)]

- d. The Permittee shall maintain records of tune-ups required by Paragraph c. above. The following information shall be included for each source:
- i. identification of the source;
  - ii. the date and time the tune-up started and ended;
  - iii. the person responsible for performing the tune-up; and
  - iv. for boilers the checklist for inspection of the burner, flame pattern, combustion control system, and all other components of the boiler identified in the protocol, noting any repairs or replacements made;
  - v. any stack gas analyses performed after the completion of all adjustments to show that the operating parameters of the boiler, have been optimized with respect to fuel consumption and output; at a minimum these parameters shall be within the range established by the equipment manufacturer to ensure that the emission limitation for nitrogen oxides has not been exceeded; and
  - vi. any other information requested by the Director (or designee) to show that the boiler is being operated and maintained in a manner to minimize the emissions of nitrogen oxides.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1407 if these records are not maintained.

- e. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
- i. the date and time of each recorded action;
  - ii. the results of each annual tune-up and inspection along with any corrective actions taken; and
  - iii. the results of any corrective actions performed.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1407 if these records are not maintained.

**Reporting** [15A NCAC 02Q .0508(f)]

- f. The Permittee shall submit a summary report postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**6. 15A NCAC 02D .1109: 112(j) CASE-BY-CASE MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY (Case-by-Case MACT for Boilers & Process Heaters)**

- a. i. The Permittee shall use best combustion practices when operating the Auxiliary Boiler (**ID No. ES-6**).
- ii. The permittee shall comply with this CAA §112(j) standard until May 19, 2019. The initial compliance date for the applicable CAA §112(d) standard for "National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters" is May 20, 2019.

**Monitoring** [15A NCAC 02Q .0508(f)]

- b. The Permittee completed the required one-time energy assessment on October 5, 2015.

- c. To ensure compliance, the Permittee shall perform an annual process heater inspection and maintenance as recommended by the manufacturer, or as a minimum, the inspection and maintenance requirement shall include the following:
  - i. Inspect the burner, and clean or replace any components of the burner as necessary;
  - ii. Inspect the flame pattern and make any adjustments to the burner necessary to optimize the flame pattern; and
  - iii. Inspect the system controlling the air-to-fuel ratio, and ensure that it is correctly calibrated and functioning properly.

The Permittee shall conduct at least one tune-up per calendar year to demonstrate compliance with this requirement. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if the affected process heater is not inspected and maintained as required above.

**Recordkeeping** [15A NCAC 02Q .0508(f)]

- d. The results of inspection and maintenance Paragraph c. shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
  - i. The date of each recorded action;
  - ii. The results of each inspection; and,
  - iii. The results of any maintenance performed on the boilers.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if these records are not maintained.

**Reporting** [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Section 2.1 D.6. c. and d above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**7. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY**  
(40 CFR Part 63, Subpart DDDDD)

**Applicability** [40 CFR 63.7485, 40 CFR 63.7490(d), 63.7499(l)]

- a. i. For the existing boiler with a heat input capacity equal to or greater than 10 million Btu per hour and designed to burn "gas 1" fuels (**ID No. ES-6**), the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR Part 63, Subpart DDDDD, "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters" and Subpart A "General Provisions".
- ii. The Permittee shall comply with the CAA §112(j) standard in Section 2.1 D.6. through **May 19, 2019**. The Permittee shall be subject to the requirements of this standard starting May 20, 2019. Note that the requirements of this standard may require action on behalf of the Permittee prior to May 20, 2019.



**Definitions and Nomenclature** [40 CFR 63.7575]

- b. For the purpose of this permit condition, the definitions and nomenclature contained in 40 CFR 63.7575 shall apply.

**40 CFR Part 63 Subpart A General Provisions** [40 CFR 63.7565]

- c. The Permittee shall comply with the requirements of 40 CFR 63 Subpart A General Provisions according to the applicability of Subpart A to such sources as identified in Table 10 to 40 CFR Part 63, Subpart DDDDD.

**Compliance Date** [40 CFR 63.7510(e), 63.56(b)]

- d. The Permittee shall complete the initial tune up and the one-time energy assessment no later than May 20, 2019.

**Notifications** [40 CFR 63.7530(e),(f) and .7545(e)]

- e. The Permittee submitted the initial Notification of Compliance Status on March 16, 2016.

**General Compliance Requirements** [40 CFR 63.7505(a), 63.7500(f)]

- f. The Permittee shall be in compliance with the work practice standards in this subpart. These standards apply at all times the affected unit is operating.

**Work Practice Standards** [15A NCAC 02Q .0508(f)]

- g. The Permittee shall conduct a tune-up of the source annually as specified below.
  - i. As applicable, inspect the burner, and clean or replace any components of the burner as necessary (the Permittee may delay the burner inspection until the next scheduled or unscheduled unit shutdown);
  - ii. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;
  - iii. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown);
  - iv. Optimize total emissions of carbon monoxide. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO<sub>x</sub> requirement to which the unit is subject; and
  - v. Measure the concentrations in the effluent stream of carbon monoxide in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.

[40 CFR 63.7500(a), (e), 63.7540(a)(10)]

- h. Each annual tune-up shall be conducted no more than 13 months after the previous tune-up. [40 CFR 63.7515(d)]
- i. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup. [40 CFR 63.7540(a)(13), 63.7515(g)]
- j. At all times, you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not

limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [40 CFR 63.7500(a)(3)]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in conditions c. through j. are not met.

**Energy Assessment Requirements** [15A NCAC 02Q .0508(f)]

- k. The Permittee completed the one-time energy assessment on October 5, 2015.

**Recordkeeping Requirements** [15A NCAC 02Q .0508(f), 40 CFR 63.7555]

- l. The Permittee shall keep the following:
- i. A copy of each notification and report submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status, or semiannual compliance report that has been submitted, according to the requirements in 40 CFR 63.10(b)(2)(xiv). [40 CFR 63.7555(a)(1)]
  - ii. Maintain on-site and submit, if requested by the Administrator, an annual report containing the information in paragraphs 1. through 3., below:
    - 1. The concentrations of carbon monoxide in the effluent stream in parts per million by volume, and oxygen in volume percent, measured before and after the adjustments of the source;
    - 2. A description of any corrective actions taken as a part of the combustion adjustment; and
    - 3. The type and amount of fuel used over the 12 months prior to the annual adjustment, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.[40 CFR 63.7540(a)(10)(vi)]
  - iii. The associated records for conditions f. through l. including the occurrence and duration of each malfunction of operation (i.e., process equipment) or the required air pollution control and monitoring equipment. [40 CFR 63.10(b)(2)(ii)]
- m. The Permittee shall:
- i. maintain records in a form suitable and readily available for expeditious review;
  - ii. keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record; and
  - iii. keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. The Permittee can keep the records offsite for the remaining 3 years.

[40 CFR 63.7560, 63.10(b)(1)]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if records are not maintained as described in conditions l. through m.

**Reporting Requirements** [15A NCAC 02Q .0508(f)]

- n. The Permittee shall submit compliance reports to the DAQ on an annual basis. The Permittee shall submit the compliance report postmarked on or before January 30 of each calendar year for the preceding 12-month

period. The first report shall be postmarked on or before January 30, 2019. This report must also be submitted electronically through the EPA's Central Data Exchange (CDX) ([www.epa.gov/cdx](http://www.epa.gov/cdx)). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due the report the Permittee submit the report to the at the appropriate address listed in 40 CFR 63.13. [40 CFR 63.7550(b), 63.7550(h)(3)]

- o. The compliance report must contain the following information:
    - i. Company name and address;
    - ii. Process unit information, emissions limitations, and operating parameter limitations;
    - iii. Date of report and beginning and ending dates of the reporting period;
    - iv. The total operating time during the reporting period;
    - iv. If there are no deviations from the requirements of the work practice requirements in condition g. above, a statement that there were no deviations from the work practice standards during the reporting period; and
    - v. Include the date of the most recent tune-up for each unit required according to condition g. Include the date of the most recent burner inspection if it was not done as scheduled and was delayed until the next scheduled or unscheduled unit shutdown.
- [40 CFR 63.7550(a) and (c), Table 9]
- p. If you have a deviation from a work practice standard during the reporting period, the report must contain the following information:
    - i. A description of the deviation and which emission limit or operating limit from which you deviated; and
    - ii. Information on the number, duration, and cause of deviations (including unknown cause), as applicable, and the corrective action taken.

[40 CFR 63.7550(a) and (d), 63.7540(b), Table 9]

**E. One natural gas-fired process heater (ID No. ES-8)**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	0.50 pound per million Btu heat input	15A NCAC 02D .0503
Sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
Visible emissions	20 percent opacity	15A NCAC 02D .0521
Hazardous Air Pollutants	Best Combustion Practices	15A NCAC 02D .1109 [CAA § 112(j)]
Hazardous Air Pollutants	NESHAP for Boilers and Process Heaters See Section 2.1 E.5.	15A NCAC 02D .1111 (40 CFR Part 63, Subpart 5D)

**1. 15A NCAC 02D .0503: PARTICULATES FROM FUEL BURNING INDIRECT HEAT EXCHANGERS**

- a. Emissions of particulate matter from the combustion of natural gas that are discharged from this source (**ID No. ES-8**) into the atmosphere shall not exceed 0.50 pounds per million Btu heat input.

**Testing** [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 E.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0503.

**Monitoring/Recordkeeping/Reporting** [15A NCAC 02Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for particulate emissions from the firing of natural gas in this source (**ID No. ES-8**).

**2. 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES**

- a. Emissions of sulfur dioxide from this source (**ID No. ES-8**) shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

**Testing** [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 E.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

**Monitoring/Recordkeeping/Reporting** [15A NCAC 02Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from natural gas for this source (**ID No. ES-8**).

**3. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS**

- a. Visible emissions from this source (**ID No. ES-8**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

**Testing** [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 E.3.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

**Monitoring/Recordkeeping/Reporting** [15A NCAC 02Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for visible emissions from the firing of natural gas in this source (**ID No. ES-8**).

**4. 15A NCAC 02D .1109: 112(j) CASE-BY-CASE MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY**  
(Case-by-Case MACT for Boilers & Process Heaters)

- a. i. The Permittee shall use best combustion practices when operating the affected process heater (**ID No. ES-8**).
- ii. The permittee shall comply with this CAA §112(j) standard until May 19, 2019. The initial compliance date for the applicable CAA §112(d) standard for "National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters" is May 20, 2019.

**Monitoring** [15A NCAC 02Q .0508(f)]

- b. The Permittee completed the required one-time energy assessment on October 5, 2015.
- c. To ensure compliance, the Permittee shall perform an annual process heater inspection and maintenance as recommended by the manufacturer, or as a minimum, the inspection and maintenance requirement shall include the following:
  - i. Inspect the burner, and clean or replace any components of the burner as necessary;
  - ii. Inspect the flame pattern and make any adjustments to the burner necessary to optimize the flame pattern; and
  - iii. Inspect the system controlling the air-to-fuel ratio, and ensure that it is correctly calibrated and functioning properly.

The Permittee shall conduct at least one tune-up per calendar year to demonstrate compliance with this requirement. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if the affected process heater is not inspected and maintained as required above.

**Recordkeeping** [15A NCAC 02Q .0508(f)]

- d. The results of inspection and maintenance required by Paragraph c. shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
  - i. The date of each recorded action;
  - ii. The results of each inspection; and,
  - iii. The results of any maintenance performed on the boilers.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if these records are not maintained.

**Reporting** [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Section 2.1 E.4.c. and d. above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**5. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY**

(40 CFR Part 63, Subpart DDDDD)

**Applicability** [40 CFR 63.7485, .7490(d), .7499(l)]

- a. i. For the existing boiler with a heat input capacity of less than or equal to 5 million Btu per hour and designed to burn "gas 1" fuels (**ID No. ES-8**), the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR Part 63, Subpart DDDDD, "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters" and Subpart A "General Provisions".
- ii. The Permittee shall comply with the CAA §112(j) standard in Section 2.1 E.4. through **May 19, 2019**. The Permittee shall be subject to the requirements of this standard starting May 20, 2019. Note that the requirements of this standard may require action on behalf of the Permittee prior to May 20, 2019.

**Definitions and Nomenclature** [40 CFR 63.7575]

- b. For the purpose of this permit condition, the definitions and nomenclature contained in 40 CFR 63.7575 shall apply.

**40 CFR Part 63 Subpart A General Provisions** [40 CFR 63.7565]

- c. The Permittee shall comply with the requirements of 40 CFR 63 Subpart A General Provisions according to the applicability of Subpart A to such sources as identified in Table 10 to 40 CFR Part 63, Subpart DDDDD.

**Compliance Date** [40 CFR 63.7510(e), 63.56(b)]

- d. The Permittee shall complete the initial tune up and the one-time energy assessment no later than May 20, 2019.

**Notifications** [40 CFR 63.7530(e),(f) and .7545(e)]

- e. The Permittee submitted the initial Notification of Compliance Status on March 16, 2016.

**General Compliance Requirements** [40 CFR 63.7505(a), 63.7500(f)]

- f. The Permittee shall be in compliance with the work practice standards in this subpart. These standards apply at all times the affected unit is operating.

**Work Practice Standards** [15A NCAC 02Q .0508(f)]

- g. The Permittee shall conduct a tune-up of the boiler every five years as specified below.
  - i. As applicable, inspect the burner, and clean or replace any components of the burner as necessary (the Permittee may delay the burner inspection until the next scheduled or unscheduled unit shutdown, but the burner must be inspected at least once every 72 months)
  - ii. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;

- iii. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown)'
- iv. Optimize total emissions of carbon monoxide. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO<sub>x</sub> requirement to which the unit is subject.
- v. Measure the concentrations in the effluent stream of carbon monoxide in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.

[40 CFR 63.7500(a), (e), 63.7540(a)(10), (a)(12)]

- h. Each 5-year tune-up shall be conducted no more than 61 months after the previous tune-up. [40CFR 63.7515(d)]
- i. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup. [40 CFR 63.7540(a)(13), 63.7515(g)]
- j. At all times, you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [40 CFR 63.7500(a)(3)]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in f. through j. are not met.

**Energy Assessment Requirements** [15A NCAC 02Q .0508(f)]

- k. The Permittee completed the required one-time energy assessment on October 5, 2015

**Recordkeeping Requirements** [15A NCAC 02Q .0508(f), 40 CFR 63.7555]

- l. The Permittee shall keep the following:
  - i. A copy of each notification and report submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status, or semiannual compliance report that has been submitted, according to the requirements in 40 CFR 63.10(b)(2)(xiv). [40 CFR 63.7555(a)(1)]
  - ii. Maintain on-site and submit, if requested by the Administrator, an annual report containing the information in paragraphs 1. through 3., below:
    - 1. The concentrations of carbon monoxide in the effluent stream in parts per million by volume, and oxygen in volume percent, measured before and after the adjustments of the source;
    - 2. A description of any corrective actions taken as a part of the combustion adjustment; and
    - 3. The type and amount of fuel used over the 12 months prior to the annual adjustment, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.

[40 CFR 63.7540(a)(10)(vi)]

- iii. The associated records for conditions f. through l. including the occurrence and duration of each malfunction of operation (i.e., process equipment) or the required air pollution control and monitoring equipment. [40 CFR 63.10(b)(2)(ii)]

m. The Permittee shall:

- i. maintain records in a form suitable and readily available for expeditious review;
- ii. keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record; and
- iii. keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. The Permittee can keep the records offsite for the remaining 3 years.

[40 CFR 63.7560, 63.10(b)(1)]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if records are not maintained as described in conditions l. through m.

**Reporting Requirements** [15A NCAC 02Q .0508(f)]

- n. The Permittee shall submit compliance reports to the DAQ on a 5-year basis. The first report shall cover the period beginning on the compliance date specified in condition d. and ending on the earliest December 31st following a complete 5-year period. Subsequent 5-year reports shall cover the periods from January 1 to December 31. The Permittee shall submit the compliance reports postmarked on or before January 31. This report must also be submitted electronically through the EPA's Central Data Exchange (CDX) ([www.epa.gov/cdx](http://www.epa.gov/cdx)). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due the report the Permittee submit the report to the at the appropriate address listed in 40 CFR 63.13. [40 CFR 63.7550(a), (b), (h)(3)]
- o. The compliance report must contain the following information:
  - i. Company name and address;
  - ii. Process unit information, emissions limitations, and operating parameter limitations;
  - iii. Date of report and beginning and ending dates of the reporting period;
  - iv. The total operating time during the reporting period;
  - iv. If there are no deviations from the requirements of the work practice requirements in condition g. above, a statement that there were no deviations from the work practice standards during the reporting period; and
  - v. Include the date of the most recent tune-up for each unit required according to condition g. Include the date of the most recent burner inspection if it was not done as scheduled and was delayed until the next scheduled or unscheduled unit shutdown.

[40 CFR 63.7550(a) and (c), Table 9]

- p. If there is a deviation from a work practice standard during the reporting period, the report must contain the following information:
  - i. A description of the deviation and which emission limit or operating limit from which you deviated;



and

- ii. Information on the number, duration, and cause of deviations (including unknown cause), as applicable, and the corrective action taken.

[40 CFR 63.7550(a) and (d), 63.7540(b), Table 9]

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## 2.2- Phase II Acid Rain Permit Requirements

**ORIS code: 7826**

**Effective Date: Same as Permit issue/expiration, TBD**

### 1. Statement of Basis

Statutory and Regulatory Authorities: In accordance with the provisions of Article 21B of Chapter 143, General Statutes of North Carolina as amended and Titles IV and V of the Clean Air Act, the Department of Environment and Natural Resources, Division of Air Quality issues this permit pursuant to Title 15A North Carolina Administrative Codes, Subchapter 02Q .0400 and 02Q .0500, and other applicable Laws.

### 2. SO<sub>2</sub> Allowance Allocations and NO<sub>x</sub> Requirements for each affected unit

Source	Pollutant	Emission Limit
Unit 1 Unit 2 Unit 3	SO <sub>2</sub>	SO <sub>2</sub> allowances are not allocated by U.S. EPA for new units under 40 CFR Part 72.
Unit 4 Unit 5	NO <sub>x</sub>	Does not apply for combustion turbine units.

### 3. Comments, Notes and Justifications

None.

### 4. Phase II Permit Application (attached)

The Phase II Permit Application submitted for this facility, as approved by the Division of Air Quality, is part of this permit. The owners and operators of these Phase II acid rain sources must comply with the standard requirements and special provisions set forth in the following attached application:

Acid Rain Permit Application signed May 31, 2018

**Federal-Enforceable Only**

**2.3- Cross State Air Pollution Rule (CSAPR) Requirements**

For the combustion turbines (**ID Nos. Unit 1 through 5**), the Permittee shall comply with all applicable requirements of 40 CFR Part 97, Subpart AAAAA "TR NO<sub>x</sub> Annual Trading Program", Subpart BBBBB "TR NO<sub>x</sub> Ozone Season Trading Program", and Subpart CCCCC "TR SO<sub>2</sub> Group 1 Trading Program".

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## **SECTION 3- GENERAL CONDITIONS (version 5.3, 08/21/2018)**

This section describes terms and conditions applicable to this Title V facility.

A. **General Provisions** [NCGS 143-215 and 15A NCAC 02Q .0508(i)(16)]

1. Terms not otherwise defined in this permit shall have the meaning assigned to such terms as defined in 15A NCAC 02D and 02Q.
2. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are binding and enforceable pursuant to NCGS 143-215.114A and 143-215.114B, including assessment of civil and/or criminal penalties. Any unauthorized deviation from the conditions of this permit may constitute grounds for revocation and/or enforcement action by the DAQ.
3. This permit is not a waiver of or approval of any other Department permits that may be required for other aspects of the facility which are not addressed in this permit.
4. This permit does not relieve the Permittee from liability for harm or injury to human health or welfare, animal or plant life, or property caused by the construction or operation of this permitted facility, or from penalties therefore, nor does it allow the Permittee to cause pollution in contravention of state laws or rules, unless specifically authorized by an order from the North Carolina Environmental Management Commission.
5. Except as identified as state-only requirements in this permit, all terms and conditions contained herein shall be enforceable by the DAQ, the EPA, and citizens of the United States as defined in the Federal Clean Air Act.
6. Any stationary source of air pollution shall not be operated, maintained, or modified without the appropriate and valid permits issued by the DAQ, unless the source is exempted by rule. The DAQ may issue a permit only after it receives reasonable assurance that the installation will not cause air pollution in violation of any of the applicable requirements. A permitted installation may only be operated, maintained, constructed, expanded, or modified in a manner that is consistent with the terms of this permit.

B. **Permit Availability** [15A NCAC 02Q .0507(k) and .0508(i)(9)(B)]

The Permittee shall have available at the facility a copy of this permit and shall retain for the duration of the permit term one complete copy of the application and any information submitted in support of the application package. The permit and application shall be made available to an authorized representative of Department of Environmental Quality upon request.

C. **Severability Clause** [15A NCAC 02Q .0508(i)(2)]

In the event of an administrative challenge to a final and binding permit in which a condition is held to be invalid, the provisions in this permit are severable so that all requirements contained in the permit, except those held to be invalid, shall remain valid and must be complied with.

D. **Submissions** [15A NCAC 02Q .0507(e) and 02Q .0508(i)(16)]

Except as otherwise specified herein, two copies of all documents, reports, test data, monitoring data, notifications, request for renewal, and any other information required by this permit shall be submitted to the appropriate Regional Office. Refer to the Regional Office address on the cover page of this permit. For continuous emissions monitoring systems (CEMS) reports, continuous opacity monitoring systems (COMS) reports, quality assurance (QA)/quality control (QC) reports, acid rain CEM certification reports, and NOx budget CEM certification reports, one copy shall be sent to the appropriate Regional Office and one copy shall be sent to:

Supervisor, Stationary Source Compliance  
North Carolina Division of Air Quality  
1641 Mail Service Center  
Raleigh, NC 27699-1641

All submittals shall include the facility name and Facility ID number (refer to the cover page of this permit).

E. **Duty to Comply** [15A NCAC 02Q .0508(i)(3)]

The Permittee shall comply with all terms, conditions, requirements, limitations and restrictions set forth in this permit. Noncompliance with any permit condition except conditions identified as state-only requirements constitutes a violation of the Federal Clean Air Act. Noncompliance with any permit condition is grounds for enforcement action, for permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application.

F. **Circumvention** - STATE ENFORCEABLE ONLY

The facility shall be properly operated and maintained at all times in a manner that will effect an overall reduction in air pollution. Unless otherwise specified by this permit, no emission source may be operated without the concurrent operation of its associated air pollution control device(s) and appurtenances.

G. **Permit Modifications**

1. Administrative Permit Amendments [15A NCAC 02Q .0514]  
The Permittee shall submit an application for an administrative permit amendment in accordance with 15A NCAC 02Q .0514.
2. Transfer in Ownership or Operation and Application Submittal Content [15A NCAC 02Q .0524 and 02Q .0505]  
The Permittee shall submit an application for an ownership change in accordance with 15A NCAC 02Q.0524 and 02Q .0505.
3. Minor Permit Modifications [15A NCAC 02Q .0515]  
The Permittee shall submit an application for a minor permit modification in accordance with 15A NCAC 02Q .0515.
4. Significant Permit Modifications [15A NCAC 02Q .0516]  
The Permittee shall submit an application for a significant permit modification in accordance with 15A NCAC 02Q .0516.
5. Reopening for Cause [15A NCAC 02Q .0517]  
The Permittee shall submit an application for reopening for cause in accordance with 15A NCAC 02Q .0517.

H. **Changes Not Requiring Permit Modifications**

1. Reporting Requirements  
Any of the following that would result in new or increased emissions from the emission source(s) listed in Section 1 must be reported to the Regional Supervisor, DAQ:
  - a. changes in the information submitted in the application;
  - b. changes that modify equipment or processes; or
  - c. changes in the quantity or quality of materials processed.

If appropriate, modifications to the permit may then be made by the DAQ to reflect any necessary changes in the permit conditions. In no case are any new or increased emissions allowed that will cause a violation of the emission limitations specified herein.

2. Section 502(b)(10) Changes [15A NCAC 02Q .0523(a)]
  - a. "Section 502(b)(10) changes" means changes that contravene an express permit term or condition. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.
  - b. The Permittee may make Section 502(b)(10) changes without having the permit revised if:
    - i. the changes are not a modification under Title I of the Federal Clean Air Act;
    - ii. the changes do not cause the allowable emissions under the permit to be exceeded;
    - iii. the Permittee notifies the Director and EPA with written notification at least seven days before the change is made; and
    - iv. the Permittee shall attach the notice to the relevant permit.
  - c. The written notification shall include:
    - i. a description of the change;
    - ii. the date on which the change will occur;
    - iii. any change in emissions; and
    - iv. any permit term or condition that is no longer applicable as a result of the change.
  - d. Section 502(b)(10) changes shall be made in the permit the next time that the permit is revised or renewed, whichever comes first.
3. Off Permit Changes [15A NCAC 02Q .0523(b)]  
The Permittee may make changes in the operation or emissions without revising the permit if:
  - a. the change affects only insignificant activities and the activities remain insignificant after the change; or
  - b. the change is not covered under any applicable requirement.
4. Emissions Trading [15A NCAC 02Q .0523(c)]  
To the extent that emissions trading is allowed under 15A NCAC 02D, including subsequently adopted maximum achievable control technology standards, emissions trading shall be allowed without permit revision pursuant to 15A NCAC 02Q .0523(c).

**I.A Reporting Requirements for Excess Emissions and Permit Deviations** [15A NCAC 02D .0535(f) and 02Q .0508(f)(2)]

**"Excess Emissions"** - means an emission rate that exceeds any applicable emission limitation or standard allowed by any rule in Sections .0500, .0900, .1200, or .1400 of Subchapter 02D; or by a permit condition; or that exceeds an emission limit established in a permit issued under 15A NCAC 02Q .0700. (*Note: Definitions of excess emissions under 02D .1110 and 02D .1111 shall apply where defined by rule.*)

**"Deviations"** - for the purposes of this condition, any action or condition not in accordance with the terms and conditions of this permit including those attributable to upset conditions as well as excess emissions as defined above lasting less than four hours.

**Excess Emissions**

1. If a source is required to report excess emissions under NSPS (15A NCAC 02D .0524), NESHAPS (15A NCAC 02D .1110 or .1111), or the operating permit provides for periodic (e.g., quarterly) reporting of excess emissions, reporting shall be performed as prescribed therein.
2. If the source is not subject to NSPS (15A NCAC 02D .0524), NESHAPS (15A NCAC 02D .1110 or .1111), or these rules do NOT define "excess emissions," the Permittee shall report excess emissions in accordance with 15A NCAC 02D .0535 as follows:
  - a. Pursuant to 15A NCAC 02D .0535, if excess emissions last for more than four hours resulting from a malfunction, a breakdown of process or control equipment, or any other abnormal condition, the owner or operator shall:
    - i. notify the Regional Supervisor or Director of any such occurrence by 9:00 a.m. Eastern Time of the Division's next business day of becoming aware of the occurrence and provide:
      - name and location of the facility;
      - nature and cause of the malfunction or breakdown;
      - time when the malfunction or breakdown is first observed;
      - expected duration; and
      - estimated rate of emissions;
    - ii. notify the Regional Supervisor or Director immediately when corrective measures have been accomplished; and
    - iii. submit to the Regional Supervisor or Director within 15 days a written report as described in 15A NCAC 02D .0535(f)(3).

**Permit Deviations**

3. Pursuant to 15A NCAC 02Q .0508(f)(2), the Permittee shall report deviations from permit requirements (terms and conditions) as follows:
  - a. Notify the Regional Supervisor or Director of all other deviations from permit requirements not covered under 15A NCAC 02D .0535 quarterly. A written report to the Regional Supervisor shall include the probable cause of such deviation and any corrective actions or preventative actions taken. The responsible official shall certify all deviations from permit requirements.

**I.B Other Requirements under 15A NCAC 02D .0535**

The Permittee shall comply with all other applicable requirements contained in 15A NCAC 02D .0535, including 15A NCAC 02D .0535(c) as follows:

1. Any excess emissions that do not occur during start-up and shut-down shall be considered a violation of the appropriate rule unless the owner or operator of the sources demonstrates to the Director, that the excess emissions are a result of a malfunction. The Director shall consider, along with any other pertinent information, the criteria contained in 15A NCAC 02D .0535(c)(1) through (7).
2. 15A NCAC 02D .0535(g). Excess emissions during start-up and shut-down shall be considered a violation of the appropriate rule if the owner or operator cannot demonstrate that excess emissions are unavoidable.

**J. Emergency Provisions** [40 CFR 70.6(g)]

The Permittee shall be subject to the following provisions with respect to emergencies:

1. An emergency means any situation arising from sudden and reasonably unforeseeable events beyond the control of the facility, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the facility to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error.

2. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions specified in 3. below are met.
3. The affirmative defense of emergency shall be demonstrated through properly signed contemporaneous operating logs or other relevant evidence that include information as follows:
  - a. an emergency occurred and the Permittee can identify the cause(s) of the emergency;
  - b. the permitted facility was at the time being properly operated;
  - c. during the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the standards or other requirements in the permit; and
  - d. the Permittee submitted notice of the emergency to the DAQ within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
5. This provision is in addition to any emergency or upset provision contained in any applicable requirement specified elsewhere herein.

K. **Permit Renewal** [15A NCAC 02Q .0508(e) and 02Q .0513(b)]

This 15A NCAC 02Q .0500 permit is issued for a fixed term not to exceed five years and shall expire at the end of its term. Permit expiration terminates the facility's right to operate unless a complete 15A NCAC 02Q .0500 renewal application is submitted at least six months before the date of permit expiration. If the Permittee or applicant has complied with 15A NCAC 02Q .0512(b)(1), this 15A NCAC 02Q .0500 permit shall not expire until the renewal permit has been issued or denied. Permit expiration under 15A NCAC 02Q .0400 terminates the facility's right to operate unless a complete 15A NCAC 02Q .0400 renewal application is submitted at least six months before the date of permit expiration for facilities subject to 15A NCAC 02Q .0400 requirements. In either of these events, all terms and conditions of these permits shall remain in effect until the renewal permits have been issued or denied.

L. **Need to Halt or Reduce Activity Not a Defense** [15A NCAC 02Q .0508(i)(4)]

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

M. **Duty to Provide Information (submittal of information)** [15A NCAC 02Q .0508(i)(9)]

1. The Permittee shall furnish to the DAQ, in a timely manner, any reasonable information that the Director may request in **writing** to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit.
2. The Permittee shall furnish the DAQ copies of records required to be kept by the permit when such copies are requested by the Director. For information claimed to be confidential, the Permittee may furnish such records directly to the EPA upon request along with a claim of confidentiality.

N. **Duty to Supplement** [15A NCAC 02Q .0507(f)]

The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the DAQ. The Permittee shall also provide additional information as necessary to address any requirement that becomes applicable to the facility after the date a complete permit application was submitted but prior to the release of the draft permit.

O. **Retention of Records** [15A NCAC 02Q .0508(f) and 02Q .0508 (l)]

The Permittee shall retain records of all required monitoring data and supporting information for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring information, and copies of all reports required by the permit. These records shall be maintained in a form suitable and readily available for expeditious inspection and review. Any records required by the conditions of this permit shall be kept on site and made available to DAQ personnel for inspection upon request.

P. **Compliance Certification** [15A NCAC 02Q .0508(n)]

The Permittee shall submit to the DAQ and the EPA (Air and EPCRA Enforcement Branch, EPA, Region 4, 61 Forsyth Street SW, Atlanta, GA 30303) postmarked on or before March 1 a compliance certification (for the preceding calendar year) by a responsible official with all federally-enforceable terms and conditions in the permit, including emissions limitations, standards, or work practices. It shall be the responsibility of the current owner to submit a compliance certification for the entire year regardless of who owned the facility during the year. The compliance certification shall

comply with additional requirements as may be specified under Sections 114(a)(3) or 504(b) of the Federal Clean Air Act. The compliance certification shall specify:

1. the identification of each term or condition of the permit that is the basis of the certification;
2. the compliance status (with the terms and conditions of the permit for the period covered by the certification);
3. whether compliance was continuous or intermittent; and
4. the method(s) used for determining the compliance status of the source during the certification period.

Q. **Certification by Responsible Official** [15A NCAC 02Q .0520]

A responsible official shall certify the truth, accuracy, and completeness of any application form, report, or compliance certification required by this permit. All certifications shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

R. **Permit Shield for Applicable Requirements** [15A NCAC 02Q .0512]

1. Compliance with the terms and conditions of this permit shall be deemed compliance with applicable requirements, where such applicable requirements are included and specifically identified in the permit as of the date of permit issuance.
2. A permit shield shall not alter or affect:
  - a. the power of the Commission, Secretary of the Department, or Governor under NCGS 143-215.3(a)(12), or EPA under Section 303 of the Federal Clean Air Act;
  - b. the liability of an owner or operator of a facility for any violation of applicable requirements prior to the effective date of the permit or at the time of permit issuance;
  - c. the applicable requirements under Title IV; or
  - d. the ability of the Director or the EPA under Section 114 of the Federal Clean Air Act to obtain information to determine compliance of the facility with its permit.
3. A permit shield does not apply to any change made at a facility that does not require a permit or permit revision made under 15A NCAC 02Q .0523.
4. A permit shield does not extend to minor permit modifications made under 15A NCAC 02Q .0515.

S. **Termination, Modification, and Revocation of the Permit** [15A NCAC 02Q .0519]

The Director may terminate, modify, or revoke and reissue this permit if:

1. the information contained in the application or presented in support thereof is determined to be incorrect;
2. the conditions under which the permit or permit renewal was granted have changed;
3. violations of conditions contained in the permit have occurred;
4. the EPA requests that the permit be revoked under 40 CFR 70.7(g) or 70.8(d); or
5. the Director finds that termination, modification, or revocation and reissuance of the permit is necessary to carry out the purpose of NCGS Chapter 143, Article 21B.

T. **Insignificant Activities** [15A NCAC 02Q .0503]

Because an emission source or activity is insignificant does not mean that the emission source or activity is exempted from any applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement. The Permittee shall have available at the facility at all times and made available to an authorized representative upon request, documentation, including calculations, if necessary, to demonstrate that an emission source or activity is insignificant.

U. **Property Rights** [15A NCAC 02Q .0508(i)(8)]

This permit does not convey any property rights in either real or personal property or any exclusive privileges.

V. **Inspection and Entry** [15A NCAC 02Q .0508(l) and NCGS 143-215.3(a)(2)]

1. Upon presentation of credentials and other documents as may be required by law, the Permittee shall allow the DAQ, or an authorized representative, to perform the following:
  - a. enter the Permittee's premises where the permitted facility is located or emissions-related activity is conducted, or where records are kept under the conditions of the permit;
  - b. have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;
  - c. inspect at reasonable times and using reasonable safety practices any source, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
  - d. sample or monitor substances or parameters, using reasonable safety practices, for the purpose of assuring compliance with the permit or applicable requirements at reasonable times.



Nothing in this condition shall limit the ability of the EPA to inspect or enter the premises of the Permittee under Section 114 or other provisions of the Federal Clean Air Act.

2. No person shall refuse entry or access to any authorized representative of the DAQ who requests entry for purposes of inspection, and who presents appropriate credentials, nor shall any person obstruct, hamper, or interfere with any such authorized representative while in the process of carrying out his official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

W. **Annual Fee Payment** [15A NCAC 02Q .0508(i)(10)]

1. The Permittee shall pay all fees in accordance with 15A NCAC 02Q .0200.
2. Payment of fees may be by check or money order made payable to the N.C. Department of Environmental Quality. Annual permit fee payments shall refer to the permit number.
3. If, within 30 days after being billed, the Permittee fails to pay an annual fee, the Director may initiate action to terminate the permit under 15A NCAC 02Q .0519.

X. **Annual Emission Inventory Requirements** [15A NCAC 02Q .0207]

The Permittee shall report by **June 30 of each year** the actual emissions of each air pollutant listed in 15A NCAC 02Q .0207(a) from each emission source within the facility during the previous calendar year. The report shall be in or on such form as may be established by the Director. The accuracy of the report shall be certified by a responsible official of the facility.

Y. **Confidential Information** [15A NCAC 02Q .0107 and 02Q .0508(i)(9)]

Whenever the Permittee submits information under a claim of confidentiality pursuant to 15A NCAC 02Q .0107, the Permittee may also submit a copy of all such information and claim directly to the EPA upon request. All requests for confidentiality must be in accordance with 15A NCAC 02Q .0107.

Z. **Construction and Operation Permits** [15A NCAC 02Q .0100 and .0300]

A construction and operating permit shall be obtained by the Permittee for any proposed new or modified facility or emission source which is not exempted from having a permit prior to the beginning of construction or modification, in accordance with all applicable provisions of 15A NCAC 02Q .0100 and .0300.

AA. **Standard Application Form and Required Information** [15A NCAC 02Q .0505 and .0507]

The Permittee shall submit applications and required information in accordance with the provisions of 15A NCAC 02Q .0505 and .0507.

BB. **Financial Responsibility and Compliance History** [15A NCAC 02Q .0507(d)(4)]

The DAQ may require an applicant to submit a statement of financial qualifications and/or a statement of substantial compliance history.

CC. **Refrigerant Requirements (Stratospheric Ozone and Climate Protection)** [15A NCAC 02Q .0501(e)]

1. If the Permittee has appliances or refrigeration equipment, including air conditioning equipment, which use Class I or II ozone-depleting substances such as chlorofluorocarbons and hydrochlorofluorocarbons listed as refrigerants in 40 CFR Part 82 Subpart A Appendices A and B, the Permittee shall service, repair, and maintain such equipment according to the work practices, personnel certification requirements, and certified recycling and recovery equipment specified in 40 CFR Part 82 Subpart F.
2. The Permittee shall not knowingly vent or otherwise release any Class I or II substance into the environment during the repair, servicing, maintenance, or disposal of any such device except as provided in 40 CFR Part 82 Subpart F.
3. The Permittee shall comply with all reporting and recordkeeping requirements of 40 CFR 82.166. Reports shall be submitted to the EPA or its designee as required.

DD. **Prevention of Accidental Releases - Section 112(r)** [15A NCAC 02Q .0508(h)]

If the Permittee is required to develop and register a Risk Management Plan with EPA pursuant to Section 112(r) of the Clean Air Act, then the Permittee is required to register this plan in accordance with 40 CFR Part 68.

EE. **Prevention of Accidental Releases General Duty Clause - Section 112(r)(1)** – FEDERALLY-ENFORCEABLE ONLY

Although a risk management plan may not be required, if the Permittee produces, processes, handles, or stores any amount of a listed hazardous substance, the Permittee has a general duty to take such steps as are necessary to prevent the accidental release of such substance and to minimize the consequences of any release.

FF. **Title IV Allowances** [15A NCAC 02Q .0508(i)(1)]

This permit does not limit the number of Title IV allowances held by the Permittee, but the Permittee may not use allowances as a defense to noncompliance with any other applicable requirement. The Permittee's emissions may not exceed any allowances that the facility lawfully holds under Title IV of the Federal Clean Air Act.

GG. **Air Pollution Emergency Episode** [15A NCAC 02D .0300]

Should the Director of the DAQ declare an Air Pollution Emergency Episode, the Permittee will be required to operate in accordance with the Permittee's previously approved Emission Reduction Plan or, in the absence of an approved plan, with the appropriate requirements specified in 15A NCAC 02D .0300.

HH. **Registration of Air Pollution Sources** [15A NCAC 02D .0202]

The Director of the DAQ may require the Permittee to register a source of air pollution. If the Permittee is required to register a source of air pollution, this registration and required information will be in accordance with 15A NCAC 02D .0202(b).

II. **Ambient Air Quality Standards** [15A NCAC 02D .0501(c)]

In addition to any control or manner of operation necessary to meet emission standards specified in this permit, any source of air pollution shall be operated with such control or in such manner that the source shall not cause the ambient air quality standards in 15A NCAC 02D .0400 to be exceeded at any point beyond the premises on which the source is located. When controls more stringent than named in the applicable emission standards in this permit are required to prevent violation of the ambient air quality standards or are required to create an offset, the permit shall contain a condition requiring these controls.

JJ. **General Emissions Testing and Reporting Requirements** [15A NCAC 02Q .0508(i)(16)]

Emission compliance testing shall be by the procedures of Section .2600, except as may be otherwise required in Rules .0524, .0912, .1110, .1111, or .1415 of Subchapter 02D. If emissions testing is required by this permit or the DAQ or if the Permittee submits emissions testing to the DAQ to demonstrate compliance, the Permittee shall perform such testing in accordance with 15A NCAC 02D .2600 and follow the procedures outlined below:

1. The owner or operator of the source shall arrange for air emission testing protocols to be provided to the Director prior to air pollution testing. Testing protocols are not required to be pre-approved by the Director prior to air pollution testing. The Director shall review air emission testing protocols for pre-approval prior to testing if requested by the owner or operator at least **45 days** before conducting the test.
2. Any person proposing to conduct an emissions test to demonstrate compliance with an applicable standard shall notify the Director at least **15 days** before beginning the test so that the Director may at his option observe the test.
3. The owner or operator of the source shall arrange for controlling and measuring the production rates during the period of air testing. The owner or operator of the source shall ensure that the equipment or process being tested is operated at the production rate that best fulfills the purpose of the test. The individual conducting the emission test shall describe the procedures used to obtain accurate process data and include in the test report the average production rates determined during each testing period.
4. Two copies of the final air emission test report shall be submitted to the Director not later than **30 days** after sample collection unless otherwise specified in the specific conditions. The owner or operator may request an extension to submit the final test report. The Director shall approve an extension request if he finds that the extension request is a result of actions beyond the control of the owner or operator.
  - a. The Director shall make the final determination regarding any testing procedure deviation and the validity of the compliance test. The Director may:
    - i. Allow deviations from a method specified under a rule in this Section if the owner or operator of the source being tested demonstrates to the satisfaction of the Director that the specified method is inappropriate for the source being tested.
    - ii. Prescribe alternate test procedures on an individual basis when he finds that the alternative method is necessary to secure more reliable test data.
    - iii. Prescribe or approve methods on an individual basis for sources or pollutants for which no test method is specified in this Section if the methods can be demonstrated to determine compliance of permitted emission sources or pollutants.
  - b. The Director may authorize the Division of Air Quality to conduct independent tests of any source subject to a rule in this Subchapter to determine the compliance status of that source or to verify any test data submitted relating to that source. Any test conducted by the Division of Air Quality using the appropriate testing procedures described in Section 02D .2600 has precedence over all other tests.

**KK. Reopening for Cause** [15A NCAC 02Q .0517]

1. A permit shall be reopened and revised under the following circumstances:
  - a. additional applicable requirements become applicable to a facility with remaining permit term of three or more years;
  - b. additional requirements (including excess emission requirements) become applicable to a source covered by Title IV;
  - c. the Director or EPA finds that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; or
  - d. the Director or EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements.
2. Any permit reopening shall be completed or a revised permit issued within 18 months after the applicable requirement is promulgated. No reopening is required if the effective date of the requirement is after the expiration of the permit term unless the term of the permit was extended pursuant to 15A NCAC 02Q .0513(c).
3. Except for the state-enforceable only portion of the permit, the procedures set out in 15A NCAC 02Q .0507, .0521, or .0522 shall be followed to reissue the permit. If the State-enforceable only portion of the permit is reopened, the procedures in 15A NCAC 02Q .0300 shall be followed. The proceedings shall affect only those parts of the permit for which cause to reopen exists.
4. The Director shall notify the Permittee at least 60 days in advance of the date that the permit is to be reopened, except in cases of imminent threat to public health or safety the notification period may be less than 60 days.
5. Within 90 days, or 180 days if the EPA extends the response period, after receiving notification from the EPA that a permit needs to be terminated, modified, or revoked and reissued, the Director shall send to the EPA a proposed determination of termination, modification, or revocation and reissuance, as appropriate.

**LL. Reporting Requirements for Non-Operating Equipment** [15A NCAC 02Q .0508(i)(16)]

The Permittee shall maintain a record of operation for permitted equipment noting whenever the equipment is taken from and placed into operation. When permitted equipment is not in operation, the requirements for testing, monitoring, and recordkeeping are suspended until operation resumes.

**MM. Fugitive Dust Control Requirement** [15A NCAC 02D .0540]

As required by 15A NCAC 02D .0540 "Particulates from Fugitive Dust Emission Sources," the Permittee shall not cause or allow fugitive dust emissions to cause or contribute to substantive complaints or excess visible emissions beyond the property boundary. If substantive complaints or excessive fugitive dust emissions from the facility are observed beyond the property boundaries for six minutes in any one hour (using Reference Method 22 in 40 CFR, Appendix A), the owner or operator may be required to submit a fugitive dust plan as described in 02D .0540(f).

"Fugitive dust emissions" means particulate matter from process operations that does not pass through a process stack or vent and that is generated within plant property boundaries from activities such as: unloading and loading areas, process areas, stockpiles, stock pile working, plant parking lots, and plant roads (including access roads and haul roads).

**NN. Specific Permit Modifications** [15A NCAC 02Q .0501 and .0523]

1. For modifications made pursuant to 15A NCAC 02Q .0501(c)(2), the Permittee shall file a Title V Air Quality Permit Application for the air emission source(s) and associated air pollution control device(s) on or before 12 months after commencing operation.
2. For modifications made pursuant to 15A NCAC 02Q .0501(d)(2), the Permittee shall not begin operation of the air emission source(s) and associated air pollution control device(s) until a Title V Air Quality Permit Application is filed and a construction and operation permit following the procedures of Section .0500 (except for Rule .0504 of this Section) is obtained.
3. For modifications made pursuant to 502(b)(10), in accordance with 15A NCAC 02Q .0523(a)(1)(C), the Permittee shall notify the Director and EPA (EPA - Air Planning Branch, 61 Forsyth Street SW, Atlanta, GA 30303) in writing at least seven days before the change is made. The written notification shall include:
  - a. a description of the change at the facility;
  - b. the date on which the change will occur;
  - c. any change in emissions; and
  - d. any permit term or condition that is no longer applicable as a result of the change.

In addition to this notification requirement, with the next significant modification or Air Quality Permit renewal, the Permittee shall submit a page "E5" of the application forms signed by the responsible official verifying that the

application for the 502(b)(10) change/modification, is true, accurate, and complete. Further note that modifications made pursuant to 502(b)(10) do not relieve the Permittee from satisfying preconstruction requirements.

OO. **Third Party Participation and EPA Review** [15A NCAC 02Q .0521, .0522 and .0525(7)]

For permits modifications subject to 45-day review by the federal Environmental Protection Agency (EPA), EPA's decision to not object to the proposed permit is considered final and binding on the EPA and absent a third party petition, the failure to object is the end of EPA's decision-making process with respect to the revisions to the permit. The time period available to submit a public petition pursuant to 15A NCAC 02Q .0518 begins at the end of the 45-day EPA review period.

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## Attachment 1 to Air Quality Permit 08758T21

### List of Acronyms

<b>AOS</b>	Alternative Operating Scenario
<b>BACT</b>	Best Available Control Technology
<b>Btu</b>	British thermal unit
<b>CAA</b>	Clean Air Act
<b>CSAPR</b>	Cross State Air Pollution Rule
<b>CEM</b>	Continuous Emission Monitor
<b>CFR</b>	Code of Federal Regulations
<b>DAQ</b>	Division of Air Quality
<b>DEQ</b>	Department of Environmental Quality
<b>EMC</b>	Environmental Management Commission
<b>EPA</b>	Environmental Protection Agency
<b>FR</b>	Federal Register
<b>GACT</b>	Generally Available Control Technology
<b>HAP</b>	Hazardous Air Pollutant
<b>MACT</b>	Maximum Achievable Control Technology
<b>NAA</b>	Non-Attainment Area
<b>NCAC</b>	North Carolina Administrative Code
<b>NCGS</b>	North Carolina General Statutes
<b>NESHAP</b>	National Emission Standards for Hazardous Air Pollutants
<b>NO<sub>x</sub></b>	Nitrogen Oxides
<b>NSPS</b>	New Source Performance Standard
<b>OAH</b>	Office of Administrative Hearings
<b>PM</b>	Particulate Matter
<b>PM<sub>10</sub></b>	Particulate Matter with Nominal Aerodynamic Diameter of 10 Micrometers or Less
<b>POS</b>	Primary Operating Scenario
<b>PSD</b>	Prevention of Significant Deterioration
<b>RACT</b>	Reasonably Available Control Technology
<b>SIC</b>	Standard Industrial Classification
<b>SIP</b>	State Implementation Plan
<b>SO<sub>2</sub></b>	Sulfur Dioxide
<b>tpy</b>	Tons Per Year
<b>VOC</b>	Volatile Organic Compound

Attachment 2 to Air Quality Permit 08758T21

**Acid Rain Permit Application**

(Dated May 31, 2018)  
(five pages)

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